

ENRON, EPISTEMOLOGY, AND ACCOUNTABILITY: REGULATING IN A GLOBAL ECONOMY

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INTRODUCTION

Enron, WorldCom, Global Crossing . . . if the consequences were not despoiling the economy (and our retirement funds), the avalanche of corporate

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defections would be downright entertaining. Among the largest and most widely followed publicly held corporations, these kinds of firms were once thought the least likely to undertake risky actions that would lead to financial fraud. Nonetheless, large publicly held corporations increasingly have misrepresented their financial health.¹ As a result, corporate governance has become a key issue for reinvigorating investor confidence, impelling legislation, commentary and debate. This Article draws on insights from evolutionary biology, game theory, and cognitive decision theory to examine the current global crisis in corporate governance and proposes solutions to this predicament.

The current crisis in corporate governance is a consequence of a pervasive undermining of safeguards designed to prevent financial fraud. Congress, the Securities and Exchange Commission (SEC), and the courts have whittled away investor protections under the federal securities regulations using a combination of regulatory reforms and enactment of legislative and judicial barriers to enforcement mechanisms.² Despite the acknowledged importance of information to the functioning of efficient markets, the SEC has increasingly deregulated disclosure over the last two decades, partly for political reasons, and partly as an accommodation to globalization.³ In addition, private litigation barriers have exacerbated the problem.⁴ Commentators have justified deregulation of the

1. U.S. GEN. ACCOUNTING OFF., PUB. NO. GAO-03-138, REGULATORY RESPONSES AND REMAINING CHALLENGES 4 [hereinafter GAO Report]. The GAO Report found that between January 1997 and June 2002, 10% of all listed companies announced at least one financial statement restatement. *Id.* The Report finds a significant growth in fraudulent financial misrepresentations (showing 165% growth in financial statement restatements due to prior misrepresentations). *Id.* at 17. During this time period, the size of the typical restating company rose from an average (median) of \$500 million (\$143 million) in 1997 to \$2 billion (\$351 million) in 2002. *Id.* Issues involving revenue recognition accounted for nearly 38% of these restatements. *Id.* at 5.

2. See, e.g., Larry E. Ribstein, *Market vs. Regulatory Responses to Corporate Fraud: A Critique of the Sarbanes-Oxley Act of 2002*, 28 J. CORP. L. 1, 17 (2002) (noting that “[r]ecent corporate frauds occurred following 1990s laws scaling back potential liability for corporate fraud”); John C. Coffee, Jr., *Understanding Enron: “It’s About the Gatekeepers, Stupid,”* 57 BUS. LAW. 1403, 1409 (2002) (noting the deregulatory movement during the 1990s that sought to dismantle arguably obsolete regulatory provisions).

3. For example, Stephen Bainbridge, who argues in favor of deregulation, points to private securities litigation as a reason that mandatory disclosure is unnecessary. Stephen M. Bainbridge, *Mandatory Disclosure: A Behavioral Analysis*, 68 U. CIN. L. REV. 1023, 1033 (2000) (arguing for deregulation on the basis of the status quo bias of behavioral economics). What Bainbridge fails to address, however, are the severe impediments to private antifraud enforcement posed by the Private Securities Litigation Reform Act of 1995 (PSLRA).

4. The PSLRA (with its increased pleading standards) combined with judicial hostility to plaintiffs’ civil actions, which make it more difficult for shareholders to remedy and deter nondisclosure, place huge obstacles against anti-fraud litigation and dismantle necessary safeguards to prevent corporate overreaching. See Douglas M. Branson, *Running the Gauntlet: A Description of the Arduous, and Now Often Fatal, Journey for Plaintiffs in Federal Securities Law Actions*, 65

securities industry using economics and game theoretic arguments. Their theory is that the market will force the evolution of efficient norms.⁵ However, a proper game theoretic analysis suggests that the defections⁶ of Enron, WorldCom and their ilk are predictable outcomes from deregulation. Further, Congress's proposed solution is unlikely to fix the problem. Both game theory and the complementary insights of cognitive psychology suggest that the corporate governance measures dictated by the Sarbanes-Oxley Act are an unrealistic and ineffective answer to the current financial scandals. Tracing the deregulatory impact on both public and private enforcement mechanisms, this Article argues that even the most efficient markets need strong investor protections,⁷ and

U. CIN. L. REV. 3, 11 (1996). Some scholars contend that PSLRA has not decreased the level of meritorious filings, but their results are inconclusive. See Michael A. Perino, *Did the Private Securities Litigation Reform Act Work?*, 2003 U. ILL. L. REV. (forthcoming 2003) (noting the many variables that may affect the number of filings, and noting that "while it is difficult to assess the claim that there is more fraud now than there was prior to the PSLRA, the other explanations for the apparent increase in filings appear to be inadequate"); Ribstein, *supra* note 2, at 17 (arguing that "reduced liability risk may have encouraged fraudulent or shirking behavior in marginal situations where defrauding insiders or lax auditors had persuaded themselves that the likelihood of detection was low . . . [which] argues for reversing some aspects of PSLRA"). PSLRA was followed by the Securities Litigation Uniform Standards Act of 1998 (SLUSA), 15 U.S.C. § 77k(b) (2000). See, e.g., *Lander v. Hartford Life & Annuity Ins. Co.*, 251 F.3d 101 (2d Cir. 2001) (holding that SLUSA applied to a class action alleging misrepresentations in the sale of annuity contracts, which activated removal); *In re BankAmerica Corp. Sec. Litig.*, 263 F.3d 795, 799-801 (8th Cir. 2001) (explaining that Congress was funneling class-action securities litigation into the federal courts). The Supreme Court has also had a part in diminishing enforcement, through its decision in *Central Bank of Denver v. First Interstate Bank of Denver*, 511 U.S. 164, 191 (1994) (holding that private fraud actions under § 10(b) and Rule 10b-5 cannot be brought under an aiding and abetting theory).

5. See, e.g., Bainbridge, *supra* note 3, at 1033 (arguing from a game theoretic perspective that the market will force the evolution of efficient norms, making regulation unnecessary); Frank H. Easterbrook & Daniel R. Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 VA. L. REV. 669, 682 (1984) (arguing from a law and economics perspective for deregulation); see also Bernard Black & Reinier Kraakman, *A Self-Enforcing Model of Corporate Law*, 109 HARV. L. REV. 1911, 1939-40 (1996) (contending that under conditions of efficiency a nonlegal sanctioning system will be sufficient).

6. Defection is a term used by game theorists to express a self-interested strategy that is strictly dominant in prisoner's dilemma games, in that it is the best choice for a player given every possible choice by another player. See DOUGLAS C. BAIRD ET AL., *GAME THEORY AND THE LAW* 36 (1994) (a "strictly dominant" strategy is the best choice for a player given every possible move by another player). In the context of issuer/investor interactions, the self-interested moves (defections) consist of management self-dealing and director passivity and nondisclosure.

7. See generally JOHN MCMILLAN, *A NATURAL HISTORY OF MARKETS* (2002) (arguing that for markets to thrive in a socially productive manner, they require constant government tinkering; and explaining that "the efficacy of the stock market varies with how activist the government is in setting the platform" since "countries with stronger investor protections have bigger capital markets").

contends that the resulting vacuum created a climate ripe for corporate malfeasance.

In response to these corporate debacles (and to Enron in particular), Congress passed the Sarbanes-Oxley Act,⁸ and directed the Securities and Exchange Commission (SEC) to engage in rulemaking to address the perceived problems.⁹ Among other changes, the Act requires increased independence of auditors, directors, and analysts; beefing up the disclosures required in annual reports; and changing accounting rules that permit special purpose entities to disguise losses. Congress's principal solution regarding corporate governance was to place the firm's audit committee in charge of the relationship between the firm and its auditors.¹⁰ In addition, the audit committee must monitor a system of internal accounting controls—put in place by the chief executive and chief financial officers—to ensure that the flow of information reaches them.¹¹ Each annual report must contain an internal control report.¹² Thus, the Sarbanes-Oxley Act makes the audit committee responsible for corporate financial disclosures.¹³

This legislative response is unlikely to accomplish the necessary change. Although financial information, current business developments, and future plans are foundational information for investor decisionmaking,¹⁴ the dynamics of

8. See Michael Schroeder, *The Economy: SEC Orders New Disclosures on Company Earnings*, WALL ST. J., Jan. 16, 2003, at A2 ("Responding to recent corporate scandals . . . federal securities regulators ordered new disclosure rules to clamp down on an accounting practice that companies have increasingly used to paint rosy financial results. . . . The changes were ordered by Congress under the S-O Act, a sweeping corporate accounting-overhaul law . . .").

9. Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745; cf. *Enron Fallout: Public Policy Consequences of Enron's Collapse*, 34 Sec. Reg. & L. Rep. S-5 (BNA) (Mar. 4, 2002) (discussing proposed changes).

10. Sarbanes-Oxley Act § 301. The auditor is to be hired by and report directly to the audit committee, which must be composed of independent directors, at least one of whom must be a financial expert. Sarbanes-Oxley Act § 407 (noting that if the audit committee has no financial expert it must disclose the reasons for the absence).

11. The chief executive officer and chief financial officer must set up a compliance system, and certify that they have disclosed any deficiencies, fraud, or significant changes in the internal controls to the auditors and the audit committee. Sarbanes-Oxley Act § 302(a)(4)-(6). The chief executive officer and chief financial officer must certify in each annual and quarterly report that they have reviewed the report, that it is true (to their knowledge), that the financial statements and other financial information fairly present the financial condition of the company, that they have established and maintain internal controls designed to ensure that material information is made known to them (and any deficiencies have been disclosed to the auditor and the audit committee). Sarbanes-Oxley Act § 302.

12. Sarbanes-Oxley Act § 404.

13. See Sarbanes-Oxley 2002 § 301(4)(A) (the credit committee must establish procedures for resolving complaints about financial matters); § 301(2) (the audit committee must resolve disagreements between auditors and management); § 302 (CEO and CFO must report to audit committee deficiencies, fraud, or significant changes in internal control system).

14. See STEPHEN M. BAINBRIDGE, CORPORATION LAW AND ECONOMICS 300 (2002)

small group interactions illuminate the problematic aspects of the Sarbanes-Oxley Act's attempts to achieve accountability through compliance programs and independent directors. Directors undertake decisions and actions as a group.¹⁵ This decisionmaking context has important consequences for any attempt to resolve the agency problems arising from the separation of ownership and control.¹⁶ Group decisions, while offering many advantages over individual decisions, have limitations as well. Simply putting independent directors in charge of monitoring the corporation will not solve the problems inherent in group decisionmaking, as evolutionary game theory and cognitive psychology demonstrate.

This Article proceeds in five parts. Following the Introduction, Part I outlines the theoretical basis for a mandatory disclosure regime in securities law, the bureaucratic problem of ensuring that those who are nominally in charge of corporate decisions have access to the kinds of information they need, and the congressional solution of placing the audit committee in charge of corporate compliance. Part II discusses evolutionary game theory and the importance of regulatory structure for optimal social gains to occur. Part III discusses the Sarbanes-Oxley Act's solution of internal control system disclosure and explores the dynamics of organizational behavior in the context of financial reporting decisions under conditions of financial stress. Drawing on evolutionary game theory and cognitive psychology, Part IV proposes a self-insurance solution for large publicly held corporations that would cover independent directors' liability for financial misrepresentations that involved recklessness (but not self-dealing). This Article concludes that undermining enforcement mechanisms and decreasing disclosure obligations may have the kinds of adverse consequences the Enron implosion exemplifies. Law has an important function not only in solving information asymmetries, but also in altering players' incentives to make socially valuable transactions more likely and in channeling behavior. Both regulation and private enforcement are important components of efficient capital markets.

(observing that no one seriously disputes the importance of information as a solution to the basic agency problems arising from the separation of ownership and control); Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade*, 104 YALE L.J. 1027, 1039 (1995) (discussing the disclosure increasing effect of liability rules).

15. For example, the Delaware Code provides that the "vote of the majority of the directors present at a meeting at which a quorum is present shall be the act of the board of directors unless the certificate of incorporation or the bylaws shall require a vote of a greater number." DEL. CODE ANN. tit. 8, § 141(b) (2002).

16. The agency problem is a result, as Bearle and Means explained, of the separation of management and control. ADOLF A. BEARLE & GARDNER C. MEANS, *THE MODERN CORPORATION AND PRIVATE PROPERTY* 6 (1932) ("The separation of ownership from control produces a condition where the interests of owner and of ultimate manager may, and often do, diverge. . . .").

I. THE PROBLEM CONGRESS TRIED TO SOLVE

A. *Divergent Incentives*

In his article, *The Nature of the Firm*, Ronald Coase explained that a firm substitutes bureaucracy, hierarchy, and fiat for contract as a method of reducing transaction costs.¹⁷ Businesses coordinate individuals who specialize, and whose activities relate to each other.¹⁸ The problem is that the interests of these individuals may not always be aligned, creating agency costs. The arguments for imposing duties on corporate managers (officers and directors) on behalf of the shareholders are articulated either as a principal/agent relationship—which is problematic, because the director/shareholder relationship lacks most of the attributes of such a relationship¹⁹—or as a “nexus of contracts,” in which the other firm participants demand contracts with the firm for payment before any payment can be made to the shareholders.²⁰

Under the nexus of contracts theory, shareholders get to elect directors and impose fiduciary duties as an implied contractual exchange for accepting higher risk.²¹ Under either concept, the interests of the residual claimants (the

17. Ronald H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386, 386-405 (1937).

18. Thus, the corporation is said to be a nexus of contracts, with its predominant feature being the separation of ownership and control. FRANK H. EASTERBROOK & DANIEL R. FISCHER, *THE ECONOMIC STRUCTURE OF CORPORATE LAW I* (1999). The shareholders, who own the firm, and the managers, who run it, have divergent interests. Melvin A. Eisenberg, *The Structure of Corporation Law*, 89 *COLUM. L. REV.* 1461, 1471 (1989).

19. Margaret M. Blair & Lynn A. Stout, *Director Accountability and the Mediating Role of the Corporate Board*, 79 *WASH. U. L.Q.* 403, 409-11 (2001) (describing the fallacy of seeing the relationship as a principal/agent relationship). For example, shareholders, unlike principals, have no power to initiate corporate action, their vote is limited to choosing directors and to extraordinary board actions. *Id.*

20. See PAUL MILGROM & JOHN ROBERTS, *ECONOMICS, ORGANIZATION & MANAGEMENT* 20 (1992) (discussing the theory of the firm as a “nexus of contracts, treaties, and understandings among the individual members of the organization”); see also Blair & Stout, *supra* note 19, at 410 (describing shareholder primacy under economic theories as a consequence of seeing the relationship as a principal/agent relationship, but contending that the better theory of the firm is as a nexus of contracts, in which “nonshareholder participants in the firm (including bondholders, managers, and employees) demand contracts that require them to be fully compensated out of any revenues earned by the enterprise before any payments can be made to shareholders”).

21. See EASTERBROOK & FISCHER, *supra* note 18 (describing the theory of the firm as a nexus of contracts with shareholders as residual claimants). This is the shareholder primacy model of corporate structure. See BAINBRIDGE, *supra* note 14, at 10, 29. The director primacy model, on the other hand, sees the corporate bureaucracy as dominated by professional managers, with the directors acting as mere figureheads, and the shareholders as being largely irrelevant. Under this model, the directors are only accountable for increasing shareholder wealth. Whether in fact this is what happens, the laws of every state place a monitoring function on the board and fiduciary duties that run to the shareholders.

shareholders), the centralized management, and the monitors may diverge and monitors may shirk or self-deal (the classic problem of agency costs).²² The corporate structure contemplates decisionmaking by professional manager's fiat, monitored by the board, in which the board acts and the shareholders react.²³ If an entity chooses the corporate form, all states place directors at the apex of the decisionmaking structure.²⁴ In other words, the board has the power to monitor and discipline management, to make policy, and to demand access to resources, such as legal and accounting advice.²⁵ Shareholders have the power to withdraw, vote, and enforce duties owed to them.²⁶

Acknowledging that shareholders have such rights does not necessarily imply a regime of director liability. One of the common arguments against a shareholder primacy model is that because shareholders can reduce their risk by diversifying, there is no need for a rule of director liability.²⁷ This view contends that all directors should only be responsible for maximizing shareholder wealth, and if they fail to do so, the shareholders should sell. There are three responses to this argument. First, as Stephen Bainbridge explains, management misconduct is not a diversifiable risk.²⁸ Risk is defined by reference to the variance on return.²⁹ Misconduct does not affect variance, it erodes expected return.³⁰

Second, a steady flow of truthful information into the primary and secondary

22. See BEARLE & MEANS, *supra* note 16, at 6.

23. The Delaware Code places the nexus of contracts squarely on the directors, requiring that the corporation's "business and affairs . . . shall be managed by or under the direction of a board of directors. . . ." DEL. CODE ANN. tit. 8, § 141(a) (2002). For a discussion of the nexus theory, see BAINBRIDGE, *supra* note 14, at 197-204. The concept of a monitoring board, although accepted by state corporation statutes, is controversial in practice. See Stephen M. Bainbridge, *Independent Directors and the ALI Corporate Governance Project*, 61 GEO. WASH. L. REV. 1034, 1048 (1993). For example, when Melvin Eisenberg attempted to create the concept of a monitoring board in the ALI Principles of Corporate Governance project, it created such a storm of controversy that he was forced to drop the word "monitoring" from the ALI. *Id.* at 1048.

24. This is probably not the reality of the situation. Most decisions undoubtedly are delegated except for extraordinary decisions. As the Enron directors explained to the congressional investigators, they had what was essentially a part-time job. GAO Report, *supra* note 1, at 17.

25. See, e.g., MILGROM & ROBERTS, *supra* note 20, at 314 (noting that "[i]f any group could be considered to have residual control in a corporation, perhaps it might be the board of directors . . . [who] have the power to set dividends; to hire, fire, and set the compensation of the senior executives; to decide to enter new lines of business; to reject merger offers or instead approve and submit them to the stockholders; and so on").

26. See *id.* at 508 (discussing the shareholder options of exit and voice).

27. See BAINBRIDGE, *supra* note 14, at 263 (articulating the portfolio rationale for the business judgment rule).

28. See *id.* at 263 n.31.

29. See MILGROM & ROBERTS, *supra* note 20, at 461 ("Risk is measured by the variance of the investment returns or their standard deviation (the square root of the variance).").

30. See BAINBRIDGE *supra* note 14, at 263 n.31.

markets helps these markets grow.³¹ If the market can effectively price, it can effectively allocate capital investment.³² Capital will flow in the direction indicated by prices.³³ If there is undisclosed management fraud, investors and society suffer. Thus, sanctions are an important way of deterring misconduct. In addition, because it is common knowledge that directors and managers have incentives to withhold bad news, law gives them a way of assuring the market that they will not withhold it. Moreover, by telling issuers what information must be disclosed, regulation serves a channeling function.

Only the strongest form of the efficient market hypothesis suggests that stock prices reflect the securities' intrinsic value.³⁴ Even voluntary disclosure advocates acknowledge the importance of disclosure.³⁵ Withholding information, or providing incorrect information, is not an option for efficient markets. Voluntary disclosure theorists simply argue that market forces will provide sufficient incentives for firms to provide optimal levels of information.³⁶ This argument, however, assumes that capital financing endeavors are infinitely repeated games in which players can verify information and punish firms that provide inaccurate or too little information.³⁷ Game theory explains, however,

31. If accurate information is not made rapidly available, the markets flounder. *See, e.g.*, Marc I. Steinberg, *Curtailing Investor Protection Under the Securities Laws: Good for the Economy?*, 55 SMUL. REV. 347, 347 (2002) (noting that “[r]elatively efficient trading markets are based on a disclosure regime where transactions are expeditiously executed and competitively priced”).

32. Empirical studies of stock prices before and after the announcement of a significant event show not only that stock prices respond, but that they do so rapidly (as they did, for example, following Enron's announcement that its earnings would have to be restated for the past four years).

33. The price of stock, according to the efficient market hypothesis, reflects a consensus of market participants about the present value of a future income stream. Although the efficient market hypothesis supports the rapid incorporation of publicly available information into the stock prices, this presupposes that information is made available. *See, e.g.*, MILGROM & ROBERTS, *supra* note 20, at 467-69 (explaining that the efficient market hypothesis, under the strong form—which says stock prices reflect all information—or the moderate form—which says that stock prices reflect all publicly available information—means that stock price is a proxy for managerial performance).

34. *See* Eugene Fama, *Efficient Capital Markets II*, 46 J. FIN. 1575 (1991). The strong form of the efficient market hypothesis has been challenged by empirical studies showing that “variations in stock prices were much too large to be explained as responses to changing expectations about future dividends.” MILGROM & ROBERTS, *supra* note 20, at 470 (citing studies). Empirical support for the weak form of efficiency—that publicly available information is incorporated rapidly into the price of stock—has support. *See id.* (“The most recent econometric studies tend to support the view that the Weak Form Efficient Market Hypothesis is not fully consistent with the evidence, but that the deviations from pricing efficiency are not so great as to contradict the hypothesis ‘grossly.’”).

35. *See* EASTERBROOK & FISCHER, *supra* note 18, at 288-89.

36. *See* Black & Kraakman, *supra* note 5, at 1939-40 (contending that under conditions of efficiency a nonlegal sanctioning system will work).

37. *See* Mitu Gulati, *When Corporate Managers Fear a Good Thing is Coming to an End: The Case of Interim Nondisclosure*, 46 UCLA L. REV. 675, 691 (1999) (noting that voluntary

that verifying information is a classic problem. Even sophisticated shareholders may have difficulty discerning whether financial statements are inaccurate.³⁸

Third, the inability of the market to verify on a timely basis when defection has occurred means that sanctions will not be able to deter defections. Moreover, market incentives that sanction companies for misbehavior do not necessarily affect managerial behavior. In theory, poor managerial decisions should be reflected, at least after the fact, in stock prices, placing managers who make poor decisions in danger of being replaced.³⁹ However, because the market cannot distinguish between the consequences of managerial decisions and forces outside of management control, monitoring price is not equivalent to monitoring managerial performance. It is difficult to distinguish or differentiate managerial performance from breach.⁴⁰ Bad decisions and good decisions with bad consequences are hard for the market to distinguish.⁴¹ Moreover, it may be that the reason the price declined had more to do with information about the firm than about the decisional performance of its managers.⁴²

In addition, noise theory suggests that although stock prices reflect

disclosure theory is based on “two central assumptions . . . that companies and the market are playing an infinitely repeated game in which the benefits of cheating once are far outweighed by the reputational costs or other non-legal sanctions the company will have to bear in later transactions . . . [and] that the market can verify when the company has cheated it”). The assumption that raising capital is an infinitely repeated game is somewhat problematic, since, as Lynn Stout pointed out, it is a rare occurrence for corporations to raise capital through new equity. See Lynn A. Stout, *The Unimportance of Being Efficient: An Economic Analysis of Stock Market Pricing and Securities Regulation*, 87 MICH. L. REV. 613, 644-51 (1988). Nevertheless, firms are repeat players in the market in the sense that even private funding sources will be monitoring stock price. See Gulati, *supra*, at 730 n.160 (observing that “stock price can probably affect secondary sources of funds such as the private debt market”). Indeed, Enron’s ability to obtain financing was linked to its stock price and that was the trigger for its bankruptcy.

38. See, e.g., William W. Bratton, *Enron and the Dark Side of Shareholder Value*, 76 TUL. L. REV. 1275, 1338 (2002) (noting that despite the opacity of Enron’s financial statements, investment professionals failed to question them).

39. See Stephen A. Ross, *Disclosure Regulation in Financial Markets: Implications of Modern Finance Theory and Signaling Theory*, in ISSUES IN FINANCIAL REGULATION 177, 183-88 (Franklin R. Edwards, ed. 1979) (explaining ways in which markets monitor managers); Jeffrey N. Gordon, *The Shaping Force of Corporate Law in the New Economic Order*, 31 U. RICH. L. REV. 1473, 1486 (1997) (acknowledging that stock prices are “noisy” and “imperfect signals” in monitoring managers).

40. See Daniel R. Fischel, *Market Evidence in Corporate Law*, 69 U. CHI. L. REV. 941, 959 (2002) (arguing that although “an increase in stock price . . . should have defeated a claim for liability and damages” under corporate law, a decline in stock prices does not “establish or even suggest that the corporate managers who made the decision should be liable in damages”).

41. *Id.*

42. *Id.* at 960 (contending that if the decisional “goal is otherwise lawful, and no other grounds exist . . . for attacking what managers did, the lower stock price should be irrelevant”).

information, they do so with some over- and under-reaction.⁴³ As a result, prices are an imperfect surrogate for managerial behavior.⁴⁴ Share prices do not necessarily provide guidance in evaluating corporate decisions.⁴⁵

Thus, assuming shareholders have the power to enforce their contractual rights, they need to have information about how well the directors are performing their oversight duties.⁴⁶ Disclosure is said to be the essence of the fiduciary

43. See, e.g., Donald C. Langevoort, *Theories, Assumptions, and Securities Regulation: Market Efficiency Revisited*, 140 U. PA. L. REV. 851, 857-72 (1992); Robert Leroy, *Efficient Capital Markets and Martingales*, 27 J. ECON. LIT. 1583, 1612 (1989) (remarking that “by renaming irrational trading ‘noise’ trading, [Fischer Black, who coined the term] avoided the I-word, thereby sanitizing irrationality and rendering it palatable to many analysts”). Not only do many investors ignore the supposed efficiency of the markets in their investment behavior, commonly believing stocks to be mispriced, see, e.g., Barber & Odean, *Trading is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors*, 55 J. FIN. 773 (2000), but they also act as a herd, following the latest trends and rumors (as evident by the tech boom of the past five years and Greenspan’s frequent tirades against the irrational exuberance of the markets). See JOHN M. KEYNES, *THE GENERAL THEORY OF EMPLOYMENT, INTEREST AND MONEY* 156 (1936) (describing Keynes’ theory that stock prices reflect investors’ herd behavior and strategic assessments of what the crowd would do). Although the EMH predicts that over- or under-reactions of pricing to information will be short lived, because arbitragers will take advantage of the mispricing, this turns out—empirically—not to be the case, because of the impossibility of predicting when the mispricing will cease. See, e.g., Gulati, *supra* note 37 (noting “empirical evidence showing that financial markets both under- and overreact to information about firms”) (citing studies). These observations indicate that prices do not move smoothly to some equilibrium point reflecting their intrinsic value. See Daniel et al., *Investor Psychology and Security Markets Under- and Overreacting*, 53 J. FIN. 1839 (1998). For example, a study of 66,000 accounts at a discount brokerage found that the most frequent traders received a return of 11.4%, the samples’ average return was 16.4%, and the market return during the study period was 17.9%. See Barber & Odean, *Trading is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors*, 55 J. FIN. 773 (2000).

44. See Louis Lowenstein, *Financial Transparency and Corporate Governance: You Manage What You Measure*, 96 COLUM. L. REV. 1335, 1343-44 (1996) (arguing that stock prices are an inadequate measure of performance); Andrei Schleifer & Lawrence H. Summers, *The Noise Trader Approach to Finance*, 4 J. ECON. PERSP. 19, 19-33 (1990) (describing noise theory).

45. See Noel Gaston, *Efficiency Wages, Managerial Discretion, and the Fear of Bankruptcy*, 33 J. ECON. BEHAV. & ORG. 41, 42 (1997) (noting that a number of recent theoretical models are based on the “recognition that share prices do not necessarily provide perfect guidance in evaluating corporate decisions”).

46. See Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777 (1972) (explaining that final monitoring authority is given to the residual claimants in order to encourage detection and punishment of shirking). The firm’s nominal owners, the shareholders, have delegated control over daily operations and long-term policy to directors, who in turn delegate these powers to firm managers, because of the monitoring difficulty. See BAINBRIDGE, *supra* note 14, at 512 (discussing the impediments to shareholder democracy).

obligation,⁴⁷ and shareholders will need a mechanism other than the power to withdraw in order to enforce it. Disclosure, however, is not an unlimited obligation.⁴⁸ Rather, a duty to disclose arises only if a statute or regulation requires disclosure, or if a corporation makes incomplete or misleading disclosures.⁴⁹

The securities laws place disclosure obligations on corporate managers and directors in the form of reporting obligations and liability under the antifraud provisions.⁵⁰ State law regulates disclosure through the duty of care and the duty of loyalty. Because the business judgment rule protects even bad decisions of the board, however, the duty of care means only that the directors must engage in a good faith decision process and disclose the process that they utilized.⁵¹ In addition, directors who have a duty to disclose may not knowingly or deliberately fail to disclose facts that they know are material.⁵² The duty of loyalty prohibits director (and manager) self-dealing, which means that for a board decision to be self-interested, a majority of the board must be materially affected by the decision in a way not shared by the firm or the shareholders.⁵³ Most importantly, for liability to ensue, the decision must not have been approved by the shareholders after full disclosure.⁵⁴

47. Robert W. Hillman, *Business Partners as Fiduciaries: Reflections on the Limits of Doctrine*, 22 *CARDOZO L. REV.* 51, 69 (2000) (explaining that “disclosure is the essence of the duty of a fiduciary”).

48. As the Supreme Court explained in the context of the duty to disclose or abstain from trading, mere possession of material nonpublic information does not trigger a duty to disclose. *Chiarella v. United States*, 445 U.S. 222, 235 (1980).

49. *Id.*

50. See *Basic, Inc. v. Levinson*, 485 U.S. 224, 239 n.17 (1988) (“Silence, absent a duty to disclose, is not misleading . . .”).

51. See *BAINBRIDGE*, *supra* note 14, at 297 (discussing the “sticking point . . . [as] the adequacy of disclosure” because “[i]t is hard to imagine a board disclosure along the lines of: ‘we’re very sorry but we violated the duty of care in the following particulars, which we now describe at great length’”).

52. See *In re BankAmerica Corp. Sec. Litig.*, 78 F. Supp. 2d 976, 992-93 (E.D. Mo. 1999) (discussing the necessity of a duty to disclose before triggering the exception for knowingly or deliberately failing to disclose material facts under Delaware Code provision section 102(b)(7) that permits corporations to exculpate directors for breaches of fiduciary duty).

53. Directors are deemed disinterested when they “neither appear on both sides of a transaction nor expect to derive any personal financial benefit from it in the sense of self-dealing, as opposed to a benefit which devolves upon the corporation or all stockholders generally.” *Aronson v. Lewis*, 473 A.2d 805, 812 (Del. 1984) (citations omitted). See also *Rales v. Blasband*, 634 A.2d 927, 936 (Del. 1993) (stating “[d]irectorial interest also exists where a corporate decision will have a materially detrimental impact on a director, but not on the corporation and the stockholders”).

54. See *Smith v. Van Gorkom*, 488 A.2d 858, 890 (Del. 1985) (stating that failure to disclose material information, including the “fact that the Board had no reasonably adequate information indicative of the intrinsic value of the Company” made shareholder ratification unavailing).

Whether the underlying misconduct was self-dealing or complete lack of oversight, the disclosure problem is nearly always going to be misrepresentation by the board about their decision process or action, or a failure to disclose the basis for their decision.⁵⁵ From these basic precepts, the duty of candor and the duty to disclose arise.⁵⁶ These duties acknowledge the widely divergent incentives with respect to disclosure between corporations and their managers and investors: investors uniformly prefer more; directors and managers would prefer to withhold adverse information or information that could affect the firm's competitive situation (and their own self-interests), while disclosing favorable information to attract investors.⁵⁷

In order to trigger a disclosure duty, however, the directors must have information to disclose or be reckless in failing to obtain it.⁵⁸ The problem in large organizations is how to ensure a flow of information both to those who manage the daily operations of the firm and to those who invest in the firm. A further problem is how to make those managing the firm accountable for acting (or failing to act) on the information they obtain, without unduly undermining the discretionary authority firm managers need to make the firm profitable.⁵⁹ Ensuring that information reaches the directors is the basis for the Sarbanes-

55. As Professor Langevoort explains it, "by exposing the 'lemons' in the market basket via well-enforced disclosure requirements, it creates an environment in which both markets and the better issuers and managers can flourish." Donald C. Langevoort, *Seeking Sunlight in Santa Fe's Shadow: The SEC's Pursuit of Managerial Accountability*, 79 WASH. U. L.Q. 449, 489 (2001) (arguing that securities law and state corporate law have complementary aims in controlling agency costs in the public corporation).

56. RESTATEMENT (SECOND) OF AGENCY § 381 (1958) (stating that an agent has the duty to disclose all matters relating to the agency).

57. Amir N. Licht, *Games Commissions Play: 2x2 Games of International Securities Regulation*, 24 YALE J. INT'L L. 61, 85-86 (1999).

58. Hence the protestations of the Enron board members that they knew nothing about the dire straits of the corporation and that management withheld key information from them. See Report of the Senate Permanent Subcommittee on Investigations on the Role of the Board of Directors in Enron's Collapse, S. REP. NO. 107-70, at 9 (2002) [hereinafter Enron Report].

59. See generally Michael P. Dooley, *Two Models of Corporate Governance*, 47 BUS. LAW. 461 (1992) (explaining the central corporate governance question as achieving the proper mix of accountability and discretion). This is the reason for the business judgment rule in state corporation law. See, e.g., *Gagliardi v. TriFoods Int'l*, 683 A.2d 1049, 1052 (Del. Ch. 1996) (explaining that because shareholders "shouldn't rationally want" directors to be risk averse, the courts will abstain from interfering with business decisions); *Joy v. North*, 692 F.2d 880, 885 (2d Cir. 1982), cert. denied, 460 U.S. 1051 (1983) (noting that "the business judgment rule merely recognizes a certain voluntariness in undertaking the risk of bad business decisions"). Even bad decisions are virtually unreviewable, absent fraud, self-dealing, and such utter abdication of oversight responsibilities as to amount to aiding and abetting. See, e.g., *Francis v. United Jersey Bank*, 432 A.2d 814 (N.J. 1981) (holding duty of care requires directors to inform themselves about the affairs of the firm, so that a widow on notice from her deceased husband that her sons were liable to loot the company was under a duty to take action to prevent the loss).

Oxley Act's mandate that managers establish and maintain internal controls, and disclose their evaluation of the corporate compliance program.⁶⁰

B. Financial Misrepresentation: What Enron Didn't Say

The special purpose entities that ultimately destroyed Enron are a common type of asset securitization, involving a transaction between a selling company and an entity created for the sole purpose of buying its assets.⁶¹ In accounting terms, the asset moves off the selling company's books, and is frequently followed by a swap agreement, in which the seller reassumes risks tied to the asset.⁶² Enron engaged in a number of these transactions, with a twist.⁶³ Its swap agreements tied buyback provisions to its stock value, and permitted Enron to retain abnormally high risks.⁶⁴ Instead of using these entities for "legitimate purposes of achieving asset-liability matching, lowering funding costs, or improving liquidity," Enron used these entities to achieve an accounting result lacking in economic substance.⁶⁵

Hundreds of millions of dollars a year were kept off the Enron balance sheets by using these special purpose entities.⁶⁶ The Financial Accounting Standards Board (FASB) is trying to close such loopholes by requiring that off-balance sheet partnerships be consolidated in the parent company's books unless there is an investment by outside parties equaling 10% of the total capital (the former

60. Sarbanes-Oxley Act of 2002 § 302. Notably, reporting companies already had to implement accounting controls under the Foreign Corrupt Practices Act, 1934 Securities Exchange Act § 13(b)(2)(A) (which required issuers to keep records "which, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the issuer") and the 1934 Securities Exchange Act § 13(b)(2)(B) (which required issuers to maintain a system of internal financial controls to assure that transactions are properly authorized and that issuers have reliable information). No scienter is required in order to prove a violation of these requirements. *SEC v. World-Wide Coin Invs., Ltd.*, 567 F. Supp. 724, 749-50 (N.D. Ga. 1983). Rule 13b2-1, promulgated under § 13(b)(2), prohibits falsification of the books and records of reporting companies. *Id.* at 746. Moreover, internal controls are effectively required under the Federal Sentencing Guidelines, which permit the existence of an effective system to be a mitigating factor in sentencing. UNITED STATES SENTENCING GUIDELINES § 8C2.5(f) (2002) (reducing base fines by up to 60%).

61. Jenny B. Davis, *The Enron Factor*, 88 A.B.A. J. 40, 42 (2002).

62. *See id.* at 42 (arguing that although such transactions may "sound suspect," they are "valid financial constructions—so long as the seller company and the SPE are independent of each other and the SPE has assumed the risks a buyer would normally assume").

63. *See* Jonathan C. Lipson, *Enron, Asset Securitization and Bankruptcy Reform: Dead or Dormant?*, 11 J. BANKR. L. & PRAC. 101, 112 (2002) (discussing Enron's use of special purpose entities to manipulate accounting disclosures).

64. Davis, *supra* note 61, at 42.

65. Kip Betz, *Securitized: Panelists Call SPEs Legitimate Tool; Only Small Portion Used Improperly*, SEC. L. DAILY, Mar. 31, 2002, at D7.

66. 34 Sec. Reg. & L. Rep. S-11 (BNA) (Mar. 4, 2002).

rules required only 3% outside investment).⁶⁷ Also in the works are new rules regarding guarantees and accompanying obligations, with a proposal that the guarantor stand ready to perform over the term of the guarantee in the event of adverse financial conditions and accompanying future payments.⁶⁸ If guarantees or other arrangements shield investors from losses, the structure would have to be consolidated.⁶⁹

The International Accounting Standards Board (IASB) has much tougher rules for off-balance sheet reporting.⁷⁰ Had the United States adopted the IASB rules, Enron would have had to disclose its special purpose entities.⁷¹ Even so, IASB Chair David Tweedie acknowledged that “there may be ways in which the [international] rules could be ‘strengthened or clarified.’”⁷²

Enron not only failed to disclose its financial instability, it also failed to reveal multiple layers of conflicts of interest.⁷³ For example, in order to improve

67. *Id.*

68. *Id.*

69. Steve Burkholder, *Accounting: FASB to Address Financial “Conduits” in SPE Effort; Work on Guarantees Continues*, BANKING DAILY, Mar. 17, 2002, at D6.

70. See Patrick Tracey, *Accounting: Global Standard Setters Shift Focus to Debts Left Off Balance Sheets*, Pension & Benefits Daily Rep. (BNA) (Feb. 21, 2002).

71. See *Questioning the Books: Enron Hoped to Sway Accounting Group*, WALL ST. J., Feb. 14, 2002, at A8 (opining that “[h]ad the U.S. adopted the IASB’s stricter rules, Enron would have been required to disclose [its special purpose entities] in financial statements”).

72. Tracey, *supra* note 70. Although the SEC is considering the move toward international accounting standards—recognizing that a single system promotes transparency by permitting investors to compare the financial statements of different companies—it nonetheless continues to insist on reconciliation with GAAP. SECURITIES & EXCHANGE COMMISSION, NO. 7801, CONCEPT RELEASE: REQUEST FOR COMMENT: INT’L ACCOUNTING STANDARDS (2000). There are a number of important areas of disagreement between GAAP and the international standards, including differences in recognition, measurement, reporting requirements, and presentation. Financial Accounting Standards Board, *The IASC-U.S. Comparison Project: A Report on the Similarities and Differences between IASC Standards and U.S. GAAP* 41 (1999). Notably, accounting recognition criteria are currently the subject of much dispute in the Enron case, with auditors calling for revisions of the GAAP requirements. Of particular concern in the Enron case was the use of special-purpose entities that can be left off the consolidated books of a parent company as long as 3% of their capital comes from outsiders. Daniel Kadlec, *The [Enron] Spillover*, TIME, Feb. 4, 2002, at 28. The SEC may want to revisit its position on GAAP, which is frequently criticized as being too historically (rather than current market) based. Dynegy, Mirant and General Electric Co. have all boosted disclosure relating to special purpose entities in their annual reports, even in the absence of new regulation—though perhaps in anticipation of foreseeable future regulation. See Rachel Emma Silverman, *GE’s Annual Report Bulges with Data in Bid to Address Post-Enron Concerns*, WALL ST. J., Mar. 11, 2002, at A3 (noting that “GE went out of its way to distinguish its off-balance sheet practices from Enron’s”); *Accounting: Dynegy and Mirant Enhance Valuation Disclosure in Andersen-Audited 10-Ks*, ELECTRIC UTIL. WK., Mar. 18, 2002, at 8.

73. Rachel McTague, *Congress: Lieberman Calls Hearings on Enron on Senate Side to Look at Government Role*, 34 Sec. Reg. & L. 5 (BNA), at 5 (Jan. 7, 2002).

the appearance of Enron's finances, debt was transferred to undisclosed partnerships run by Enron executives in which officers had a personal stake.⁷⁴ By sharing directors with the entities it created, Enron violated the cardinal principle of corporate independence that validates special purpose entities.⁷⁵ In addition, the partnerships were used to enrich Enron executives while they were supposedly representing Enron in negotiating self-dealing transactions.⁷⁶ New rules are being considered to require independence of equity investors, a rule that Enron would have violated due to the heavy investment of its then-chief financial officer, Andrew Fastow, and his colleagues.⁷⁷

Inflating revenue is a widespread problem, as evidenced by investigations of Computer Associates International (for questionable accounting practices that enriched top executives),⁷⁸ CMS Energy (for counting sham energy trades as revenue), Dynegy (for sham energy trades), Global Crossing (for trading fiber optic capacity in order to record sales that were never made), Halliburton (for booking cost overruns as revenue although it might not be paid for the excess), Quest Communications International (for creating trades in fiber optic capacity that had no economic value), Reliant Resources (questionable energy trades), Waste Management (falsifying earnings), and Xerox (for including future payments on existing contracts in its current revenue).⁷⁹ These companies frequently argue that they are observing the technicalities of GAAP. Nonetheless, their practices fail to disclose the true financial picture.

Moreover, recent studies show that managers are manipulating disclosure to increase their own compensation.⁸⁰ They can do this because performance-based compensation, originally conceived to better align management and investor

74. Enron Report, *supra* note 58, at 12, 21 (observing that on three occasions the board approved the creation of special purpose entities, which were partly owned and wholly managed by Enron executives, to do business with Enron, and that each time the presentations of these entities and their transactions were described "in light of their favorable impact on Enron's financial statements").

75. Davis, *supra* note 61, at 42. For a discussion of the role of special purpose entities in Enron's collapse, see generally Steven L. Schwarcz, *Enron and the Use and Abuse of Special Purpose Entities in Corporate Structures*, 70 U. CIN. L. REV. 1309, 1314-15 (2002).

76. Enron Report, *supra* note 58, at 26, 27 (noting conflicts arising from the substantial profits that accrued to Enron executives transacting business through the "internal Enron marketplace").

77. Davis, *supra* note 61, at 42.

78. Gaston F. Ceron, *Staying Focused: Corporate Governance May Be Everybody's Responsibility; But at Some Companies, One Person Has More Responsibility Than Others*, WALL ST. J., Feb. 24, 2003, at R7 (finding the "software maker has been bruised by criticism of its executive compensation practices . . . [and an SEC] investigation into its accounting [practices]").

79. Laura S. Egodigwe et al., *A Year of Scandals and Sorrow*, WALL ST. J., Jan. 2, 2003, at R10.

80. Charles M. Yablon & Jennifer Hill, *Timing Corporate Disclosures to Maximize Performance-Based Renumeration: A Case of Misaligned Incentives?*, 35 WAKE FOREST L. REV. 83 (2000).

interests, is now a dominant form of pay in the United States and other industrialized countries.⁸¹ The reality is that these packages unduly favor management.⁸² Performance based compensation coupled with stock option grants have increased executive compensation far out of proportion to any actual increase in economic growth.⁸³

This is an important issue. Using stock option compensation to align officers' interests with those of shareholders doesn't work.⁸⁴ Any incentive to look after shareholder interests can be defeated by the possibility of stock sales, hedging through derivatives, manipulation of earnings accruals on the books, and timed disclosures of bad news. These are agency costs—incentives for self-dealing—imposed by managers on the firm and its principals, injuring firm prospects, value and credibility. In Enron, management, including directors, held off disclosure of massive losses just long enough to unload a fair quantity of their stock.⁸⁵

Enron's auditors also failed to disclose conflicts of interest which arose from their stake in selling the special entity partnerships as investment vehicles.⁸⁶

81. Stuart Weinberg, *Insiders Hedge With Zero-Cost Collars*, WALL ST. J., Aug. 7, 2002, at B5 (noting that “[m]any executive-pay packages include company shares in order to link executives’ interests to the fortunes of the companies they manage”).

82. Kathy M. Kristof, *CEOs Paid 70% More at Firms Under Scrutiny Accounting: Top Officers at 23 Companies Made Well More Than Average, According to a Study*, WALL ST. J., Aug. 26, 2002, at C3 (noting the “increasingly controversial practice of paying top executives with stock options that become valuable only if the company’s market price rises [gives] executives the incentive to inflate profits to drive up their companies’ stock prices”).

83. Yablon & Hill, *supra* note 80, at 85. FASB has taken the position that disclosure of executive stock options in financial statement footnotes is sufficient, and that it is not necessary to expense stock-based compensation. Nonetheless, it recognizes that “disclosure is not an adequate substitute for recognition of assets, liabilities, equity, revenues, and expenses in financial statements.” *Stock Options*, 34 Sec. Reg. & L. Rep. (BNA) (Mar. 4, 2002) (quoting IASB chair David Tweedie). Further, the International Accounting Standards Board (IASB), which has yet to set a standard for stock option compensation accounting, has noted that the real questions are whether it is an expense, and if so, why it does not appear in the income statement.

84. See, e.g., Lucian A. Bebchuk et al., *Managerial Power and Rent Extraction in the Design of Executive Compensation*, 69 U. CHI. L. REV. 751, 755 (2002) (concluding that “managerial power and rent extraction are indeed likely to play a significant role in executive compensation in the United States”).

85. See Enron Report, *supra* note 58, at 47-51 (explaining the significant of inadequate disclosure coupled with lavish stock option bonuses in that “giving Enron executives huge stock option awards, they might be creating incentives for Enron executives to improperly manipulate company earnings to increase the company stock price and cash in their options”).

86. These special entity partnerships are called trust-preferred securities. Goldman Sachs pioneered this investment strategy in which a corporation formed a subsidiary (in this case they were limited partnerships) that issued preferred shares paying a fixed amount to investors; the proceeds were then loaned to the corporation and treated as an asset. Apparently a change in the accounting rules is what caused Enron to have to restate its financials to account for these

They apparently made over \$1 million in fees for helping to structure the transactions, far more than from auditing the company. Enron is not the only company in which the auditing process failed to reveal impending financial disaster. Waste Management, Sunbeam, and Microstrategy are only a few of the firms in which auditors were similarly deficient.⁸⁷ Inadequate disclosure of loans or losses has surfaced as a major problem in a number of corporations now being investigated by the SEC, including Adelphia Communications (which failed to disclose \$3.1 billion in loans and loan guarantees to its founder's family), Kmart (which is being investigated for its loss accounting), Tyco (which may have made undisclosed loans to its former CEO and other top executives), and Worldcom (which made more than \$400 million in loans to its former CEO).⁸⁸ Ultimately these kinds of conflicts of interest affect the financial health of the corporation, and are information that should be disclosed.

II. EVOLUTIONARY GAME THEORY AND THE IMPORTANCE OF REGULATION

Prior to the spate of corporate fiascos, of which Enron was a part, deregulation was a popular proposal. Commentators frequently relied on game theory to justify deregulation of the securities industry. Properly applied, however, game theory suggests that deregulation actually will lead to the kind of corporate malfeasance that Enron illustrates. In particular, the branch of iterated game theory with repeat players known as evolutionary game theory, provides a useful lens through which to understand the problem of corporate monitoring, and to assess the role of law in structuring human interactions—in this case, the decisions made by those in charge of large publicly held corporations. Evolutionary game theory offers insights into the dynamics of two kinds of interactions that drive corporate governance: interactions between corporate insiders and investors, and interactions between directors and managers.

A. Basic Game Theory Concepts

Game theory is a way of mathematically modeling strategic interactions.⁸⁹ It attempts to simplify a social interaction in which at least two people (called the players) must choose a course of action. The result of the game is called a payoff. The players' choice of strategy will be based on their payoff, and what the players predict the others will do. Game theory, like conventional economics, attempts to predict human behavior by ignoring irrelevant details and focusing on the essence of a particular choice of behavior. Its goal is to predict which

partnerships. See John D. McKinnon, *Enron Tax Strategy Opposed by Clinton Draws Scrutiny of Government Officials*, WALL ST. J., Jan. 15, 2002, at A18.

87. *Oversight of Accountants and Auditors: SEC Proposes New Regulatory Regime, Oversight Panel for Accountants, Auditors*, 34 Sec. Reg. & L. Rep. (BNA) (Mar. 4, 2002).

88. Hubert B. Herring, *An Impossible Dream: Corporate Honesty*, N.Y. TIMES, June 16, 2002, § 3, at 12.

89. For an elegant introduction to game theory (without the mathematical notations), see BAIRD ET AL., *supra* note 6.

strategies the players are likely to choose, and a fundamental assumption is that players will prefer higher payoffs to lower, taking into account what the other players are likely to do.⁹⁰ Game theory assumes that players believe that other players will also act to optimize their payoffs.⁹¹ A strong assumption of game theory is complete information, which means that the players know the strategies available to each player and the payoffs to every combination of strategies.⁹² The combination of strategies in which no player could do better by changing strategies is known as the Nash equilibrium.⁹³

The best known of the normal form games⁹⁴ is Prisoner's Dilemma, which explores whether people can be motivated to behave cooperatively. Two players must decide whether to cooperate or not; if both cooperate they each receive

90. *See id.* at 11 (explaining that the idea that each player will choose the best outcome in light of what the other player is likely to do—that is, a player will choose a dominant strategy over a dominated strategy—is “the most compelling precept in all of game theory”).

91. *See id.* at 13 (illustrating the concept of iterated dominance through a normal form game between a pedestrian and motorist in which the available strategies are exercise care or exercise no care, where exercising care costs both players \$10, an accident is certain to happen if neither exercises care, 10% certain if both exercise care, and an accident costs the pedestrian \$100; if neither exercises care the motorist receives a payoff of \$0 and the pedestrian a payoff of \$100; if the motorist exercises no care, but the pedestrian exercises care, the motorist's payoff is \$0 and the pedestrian's is -\$110; because not exercising care is a dominant strategy for the motorist, the pedestrian will predict that is the strategy the motorist will adopt and therefore will not exercise care either). This model is highly stylized, in that it assumes no legal rule to shift liability, the motorists' indifference to causing harm, and an absence of harm to the motorist; nonetheless, it predicts that in a regime of no liability, the motorist will have too little incentive to take optimal care to minimize accidents. *Id.* at 14. A change in the legal rules—the game structure—will change the incentives of both players. *Id.* at 14-15.

92. *Id.* at 312. Stag hunt and prisoner's dilemma are examples of games with complete, though imperfect, information.

93. John Nash, *Equilibrium Points in N-Person Games*, 36 PROC. NAT'L ACAD. SCI. 48-49 (1950). In a single play prisoner's dilemma game, for example, there are four possible strategies: cooperate-cooperate, cooperate-defect, defect-defect, and defect-cooperate. *See, e.g.*, ALEXANDER J. FIELD, *ALTRUISTICALLY INCLINED? THE BEHAVIORAL SCIENCES, EVOLUTIONARY THEORY, AND THE ORIGINS OF RECIPROCITY 2* (2001) (discussing the concept of Nash equilibria). Defect-defect is the Nash equilibrium in single or finitely repeated prisoner's dilemma games. *Id.* at 2. It is not, however, a pareto optimal solution, in that the good of both players taken as a whole would be cooperate-cooperate, which would yield six total points rather than the maximum of five for defect-cooperate. However, from the individual player's standpoint, defection is strictly dominant, in that it results in a higher payoff regardless of the other player's strategy. *See id.* at 2 (discussing the concept of strict dominance).

94. Normal form games are those consisting of the following three elements: players, strategies and payoffs. BAIRD ET AL., *supra* note 6, at 311. Two-by-two, or bimatrix games, consist of two players, each of whom has a small number of strategies, represented by a box of four squares, the payoffs of which are listed by convention with the row player's first, and the column player's second. *Id.* at 303.

three points; if both defect (by not cooperating), they receive one point each; but if one player defects and the other cooperates, the defector receives five points and the cooperator receives zero (the sucker's payoff).⁹⁵ More total points will be garnered if they both cooperate, but from either player's standpoint it is better to defect.⁹⁶ Under these circumstances, the logical thing to do is defect because no matter what the other player's choice (cooperate or defect), the payoff will be better for the defector.⁹⁷ The Nash equilibrium, the point where no one has an incentive to deviate from the chosen strategy, is defection by both players.⁹⁸ Always Defect is the strategy of rational self-maximizers. This is true whether the game is played just once or for a set number of repetitions.

There are two inter-related games that this Article is concerned about: the issuer/investor game and the corporate governance game. The interaction between the shareholders and the issuer can be modeled as a prisoner's dilemma game where the overall payoffs for the group would be enhanced by cooperation, but where the temptation to defect results in payoffs that are far from optional because the issuer's defect position of grabbing the investors' money will tempt investors to play their defect position of keeping their money under a mattress. Thus, the investors' defect position will predominate.⁹⁹ It is a prisoner's dilemma (a kind of collective action problem) because, in a well-functioning, fraud-free market, the insiders and the investors would both be better off if the investors invested and the issuer pursued profits rather than creating the illusion of profits.

In the corporate governance game, the players are the corporation's managers and directors. The role that directors are assigned as firm monitors has dynamics similar to the well-known agency-regulated firm game, where for the firm defection means law evasion and for the regulator defection means punitive enforcement.¹⁰⁰ In the corporate governance game, defection by management

95. Martin A. Nowak et al., *Cooperation Versus Competition*, 56 FIN. ANALYSTS J. 13, 16 (2000).

96. This example is taken from BAIRD ET AL., *supra* note 6, at 33.

97. A similar game, Wolf's dilemma, in which twenty people sit in cubicles, with their fingers on buttons. After ten minutes each person will get \$1000 as long as no one pushes a button. If someone pushes a button before time, that person gets \$100 and everyone else gets nothing. Because there is a small chance that someone will push the button, logic impels each person to try to be the first pusher. See DOUGLAS R. HOFSTADTER, *METAMAGICAL THEMAS: QUESTING FOR THE ESSENCE OF MIND AND PATTERN* (1985).

98. See ANATOL RAPOPORT & ALBERT M. CHAMMAH, *PRISONER'S DILEMMA* (1965).

99. See, e.g., BAIRD ET AL., *supra* note 6, at 46 (describing lending as a two-by-two normal form game in which, absent law, no lending activity will take place). As Baird and his co-authors conclude, unless there are strong legal protections assuring investors that their money is not going to be stolen, no money will be invested. *Id.*

100. IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE* 54, 55 (1992) ("Business regulation is often modeled as a game between two players—the regulatory agency and the firm."). This inescapably oversimplifies the matter, but it has advantages of clarifying the dynamics of the interaction. *Id.* at 55. John Scholz models business regulation as a prisoner's dilemma, where the motivation of the firm is to decrease

means evading full disclosure when presenting the board with information upon which it must take action as a means of decreasing costs of compliance.¹⁰¹ Defection by directors means refusal to ratify management decisions, or in the extreme case, firing management, motivated by attempts to achieve maximum compliance with shareholder protections.¹⁰²

In a single prisoner's dilemma game, one would expect both sides to defect, that is, for management to attempt to hide information from the board that would contradict management's desired outcome, and the board to insist on full disclosure regarding the impact of management proposals on shareholders. Presumably, that insight is the reason for having a board in the first place. As the

regulatory costs and the motivation of the regulator is to maximize compliance. John T. Scholz, *Cooperation, Deterrence, and the Ecology of Regulatory Enforcement*, 18 *LAW & SOC'Y REV.* 179, 192 (1984).

101. To the detriment of shareholders, not all managers are exclusively motivated by their own self-interest. As Ayres & Braithwaite noted:

[s]ome corporate actors will comply with the law if it is economically rational for them to do so; most corporate actors will comply with the law most of the time simply because it is the law; all corporate actors are bundles of contradictory commitments to values about economic rationality, law abidingness, and business responsibility. Business executives have profit-maximizing selves and law-abiding selves, at different moments, in different contexts, the different selves prevail.

AYRES & BRAITHWAITE, *supra* note 100, at 19.

102. Another way of visualizing the game between the directors and managers is a variation on the prisoner's dilemma, the hawk-dove game. Like prisoner's dilemma, the hawk-dove game is a two-by-two normal form game. See BAIRD ET AL., *supra* note 6, at 45. For a description of this game and its relationship to the generation of oppressive norms, see Amy Wax, *Expressive Law and Oppressive Norms: A Comment on Richard McAdams's "A Focal Point Theory of Expressive Law,"* 86 *VA. L. REV.* 1731, 1732 (2000). This game also emphasizes interactions where the players can benefit from cooperation but have incompatible claims to resources. *Id.* The choices are to be assertive against the other player (play hawk) or to be submissive (play dove). Each player's first choice is to play hawk while the other plays dove. The second choice is for both the players to play dove. Third choice is to play dove while the other player plays hawk. Both players want to avoid playing hawk, because conflict is inevitable, and the costs of losing exceed the benefits of winning. Neither player knows what the strategy of the other player will be. Although the role assigned to directors is nominally that of hawk (they are supposed to monitor, after all), in practical terms they serve at the managers' will. On the other hand, the directors do have the power (though rarely exercised) to fire management in a disagreement over policy. Therefore, there is some fluidity in the roles of the players. This suggests that in repeated games, a player that was hawk may shift to dove and vice versa. Unlike prisoner's dilemma, the hawk-dove game has no single Nash equilibrium in which the strategy for each player is the best reply to itself. *Id.* at 1733. But like prisoner's dilemma, infinite repetition has the potential to change the outcome to a cooperative strategy. See, e.g., Robert J. Axelrod & Robert O. Keohane, *Achieving Cooperation Under Anarchy: Strategies and Institutions*, 38 *WORLD POL.* 226, 231 (1985) ("What is important for our purposes is not to focus exclusively on Prisoner's Dilemma per se, but to emphasize the fundamental problem that it (along with [hawk-dove and stag hunt]) illustrates.").

following section demonstrates, however, repeat interactions change the outcome to a cooperative strategy. This has advantages for the public good in the issuer/investor game, and disadvantages for the public good in the corporate governance game.

B. *Evolutionary Game Theory*

Evolutionary game theory combines the idea of evolutionary interactions with a branch of mathematical economics to demonstrate that human beings are social animals for whom reciprocity is as important as competition.¹⁰³ Competition and cooperation together drive the engines of evolution and economy.¹⁰⁴ Evolutionary game theory demonstrates the conditions under which cooperation will emerge despite a constant urge to defect.¹⁰⁵ Rather than strict competition, an alternative—and more accurate—vision is that of coevolution, with its emphasis on the importance of initial conditions for cooperation to flourish and for the gains from trade to be shared.¹⁰⁶

The twist that evolutionary game theory adds to the Prisoner's Dilemma game is that always defecting is not the most successful strategy in games repeated indefinitely.¹⁰⁷ An infinite number of strategies is possible for the

103. Evolutionary game theory demonstrates that in paired interactions, rather than strictly acting to maximize profit, people assess their partner's projected outlook and act in response. These results are explained by evolutionary biologists as conferring an evolutionary advantage to a species that lives in groups and can expect future encounters both within the group and with other groups. Evolutionary biologists theorize that the way human beings think is a product of evolutionary history, and depends not only on brain structure but also on adaptive responses to the environment (including other human beings). *See generally* Nowak et al., *supra* note 95.

104. *See* STUART KAUFFMAN, *AT HOME IN THE UNIVERSE* 240 (2000) (noting that “[a]n economy, like an ecosystem, is a web of coevolving agents” and explaining the analogy between evolution and economy in terms of complexity theory).

105. A standard Darwinian economic argument is that whatever economic institutions survive are presumptively efficient. *See* Mark Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641, 641 (1996). This is mistaken because, as Roe explains, chaos, path dependencies, and the concept of local equilibria assure that nothing about survival implies “superiority to untried alternatives.” *Id.* at 643.

106. One of the key insights of complexity theory is the importance of initial conditions for self-organization, and the role of positive feedback mechanisms. *See* RICHARD SOLE & BRIAN GOODWIN, *SIGNS OF LIFE* 299 (2000) (arguing that complex systems, such as traffic patterns, internet use, and by extension, trade transactions, need a “distributed and adaptive set of rules, always in direct interaction with the internal web dynamics [in order to] . . . effect cooperation (and not conflict) among users”). *Cf.* Guido Calabresi, *The Pointlessness of Pareto: Carrying Coase Further*, 100 YALE L. J. 1211, 1229 (1991) (castigating the use of Pareto “to hide the inevitability of distribution issues”).

107. *See* Gerald S. Wilkinson, *Reciprocal Food Sharing in the Vampire Bat*, 308 NATURE 181, 181-84 (1984) (observing that a past blood donator will receive blood from a prior recipient, but a past refuser will not, and that bats seem to be good at keeping score).

iterated game.¹⁰⁸ These repeated games of Prisoner's Dilemma illustrate a major anomaly that undermines the paradigm of self-interested profit maximizing competition in classic utility theory. Self-interest may include cooperation and retaliation, neither predicted by utility theory, because such a cooperative strategy may be more effective in evolutionary terms.¹⁰⁹ Maynard Smith theorized that a strategy is evolutionarily stable if no differing strategy can invade a population of repeat players.¹¹⁰ Evolutionary game theory thus provides a bridge between biology and economics by explaining the interaction of cooperative and competitive behavior.¹¹¹

Testing this theory, Robert Axelrod devised a series of computer tournaments to confront populations of strategies in repeated games of Prisoner's Dilemma.¹¹² In these tournaments, a strategy called "tit-for-tat" seems to rule.¹¹³ Tit-for-tat begins by cooperating and then responds in kind to whatever the other player did the last time.¹¹⁴ The advantage of tit-for-tat is "its combination of being nice, retaliatory, forgiving and clear."¹¹⁵ In a computer tournament where nasty strategies (always defect), nice strategies (always cooperate) and retaliatory strategies (tit-for-tat) played repeatedly against each other, tit-for-tat prevailed.¹¹⁶

108. See Karl Sigmund, *Automata for Repeated Games*, in *EVOLUTION AND PROGRESS IN DEMOCRACIES* 335, 336 (Johann Gotschl ed. 2001) (noting in that in the context of iterated games there are too many Nash equilibria for the concept to provide a solution).

109. See J. Maynard Smith & G. R. Price, *The Logic of Animal Conflict*, 246 *NATURE* 15, 15 (1973) (arguing that in the context of animal conflicts, strategies are hard-wired into genetic modes of behavior, so that randomly meeting players will play the game according to their genetic programming; the more successful strategies in a population will predominate because randomly meeting individual strategies will be tested against each other, and if one strategy is consistently more successful, it will dominate the population). John Maynard Smith, an evolutionary biologist, puzzled over this result, and postulated that it was linked to the courting behavior of animals, which rarely fight to the death in mating contests. Maynard Smith modeled these contests as two-by-two normal form games known as hawk-dove games. *Id.* Maynard Smith drew on Darwinian selection and postulated that this result must be a Nash equilibrium that is stable over time. He termed the biological equivalent of the Nash equilibrium an "evolutionary stable strategy" (ESS) in which natural selection causes animals to behave instinctively with similar strategies. See *id.* (exploring why animals do not generally fight to the death and concluding that in repeat games a cooperative strategy may prevail). Notably, although an ESS is a Nash equilibrium, not all Nash equilibria are ESS. See FIELD, *supra* note 93, at 140 (explaining that the best counter to an ESS must be itself). An ESS cannot be successfully invaded by any other strategy, and it may consist of "more than one strategy in stable proportions." *Id.*

110. J. MAYNARD SMITH, *EVOLUTION AND THE THEORY OF GAMES* (1982).

111. See MATT RIDLEY, *THE ORIGINS OF VIRTUE* 54 (1996) (explaining developments in the evolutionary theory of behavior).

112. ROBERT AXELROD, *THE EVOLUTION OF COOPERATION* (1984).

113. WILLIAM POUNDSTONE, *PRISONER'S DILEMMA* (1992).

114. AXELROD, *supra* note 112, at 6.

115. See *id.*

116. See RIDLEY, *supra* note 111, at 61 (detailing the Axelrod computer tournament). This

Although the success of a tit-for-tat strategy in repeat encounters might appear to be a good explanation for human cooperation, it is not, because while cooperation is encouraged by frequent repetition, so is retaliation. If two tit-for-tatters are playing repetitively, they will cooperate until one defects; but once defection has begun, a downward spiral of retaliation begins. That is the downside of tit-for-tat and may explain the incessant tribal feuds in places like Israel, Ireland, the Balkans, and Afghanistan.¹¹⁷ It also suggests the problems that a regulatory scheme based primarily on punishment may encounter.¹¹⁸

This result sparked a great deal of research into reciprocal behavior in the animal world.¹¹⁹ Although tit-for-tat is practiced by some animals (notably bats and reef fish) it is strikingly absent from most of the animal kingdom, an empirical result that led to further refinements of the Axelrod tournaments.¹²⁰ Tit for Tat only prevails where the conditions for the contest are stable. Where conditions were made more random,¹²¹ in an attempt to simulate real world conditions, a new strategy, a random Tit for Two Tats, prevailed for a while but then permitted Always Cooperate to prevail—a situation ripe for exploitation by Always Defect. Thus, this result does not explain human cooperation either,

is possible because Prisoner's Dilemma is not a zero sum game. Even a small minority of tit-for-tatters can hold its own against a majority of Always Defectors and eventually prevail because, for the most part, the individual tit-for-tatters will receive slightly less of a payoff than an Always Defector. However, in the few games against other tit-for-tatters this is more than made up for, and the more the population of tit-for-tatters grows, the larger the joint payoff. See Sigmund, *supra* note 108, at 338 (describing the Axelrod tournaments).

117. It may also explain the importance of reputation and other signaling devices. Picking the right partner to bargain with is crucial. In a world of defectors, tit-for-tat cannot take hold unless it can find other cooperators. Playing Prisoner's Dilemma with strangers heightens the importance of trustworthiness signals. One of the reasons people advertise trustworthiness, through facial expressions, actions, and reputation, is to identify people who are not opportunists and attract them. ROBERT H. FRANK, *PASSIONS WITHIN REASON* (1988) (explaining the role of emotions in advertising and identifying trustworthiness).

118. See AYRES & BRAITHWAITE, *supra* note 100, at 25 (observing that a "mostly punitive policy . . . fosters an organized business subculture of resistance to regulation. . .").

119. See RIDLEY, *supra* note 111, at 61.

120. See, e.g., Sigmund, *supra* note 108, at 339 (introducing the notion of random error).

121. Robert Sugden proposed an asynchronous game (for a strategy called "Contrite Tit for Tat"—which I call Tit for Two Tats), in which a state "good" or "bad" is assigned to each player; the player chooses to cooperate or defect, and is assigned a new state depending on both the player's prior move and prior state. ROBERT SUGDEN, *THE ECONOMICS OF RIGHTS, COOPERATION AND WELFARE* (1986). Sigmund explains the strategy:

If my opponent was in state g or both players were in b, I achieve state g if I have played C, or else b. But if I was in state g while the opponent was in b, then I enter state g, no matter whether I have played C or D. Hence, if I play C, I always achieve state g. If I play D, however, I will get into state g only if, in the previous round, I was in g and opponent in b.

Sigmund, *supra* note 108, at 340-41.

because it is an unstable downward spiral.¹²² Nor does it provide much guidance for how to structure a regulatory game to achieve an optimal balance of cooperation and competition.

A more stable strategy is Pavlov, a strategy that repays its partners in kind (like for Tit for Tat), forgiving occasionally (like Tit for Two Tats), but with a nasty streak that lets it exploit Always Cooperate.¹²³ A Pavlov player starts with cooperate and defects in the next round if the opponent's move was different.¹²⁴ If both players defected in the prior round, Pavlov tries cooperating; if the opponent cooperated when Pavlov defected, Pavlov defects again. If Pavlov cooperated while the opponent defected, Pavlov's next move is defection. This makes for a stable strategy, because if one player erroneously chooses to defect, cooperation is reestablished in two rounds.¹²⁵ Pavlov's flaw, however, is that in an Always Defect environment, it cannot prevail.¹²⁶

A better strategy is Firm-but-Fair, which is slightly nicer than Pavlov, in that it "cooperates with cooperators, returns to cooperating after a mutual defection, and punishes a sucker by further defection, but unlike Pavlov it continues to cooperate after being the sucker in the previous round."¹²⁷ The success of Firm-but-Fair strategy is evolutionarily stable for Prisoner's Dilemma and is a possible explanation for the evolution of human cooperative behavior.¹²⁸ This is because, when it is surrounded by a population of Always Defect players, Firm-but-Fair acts like Tit for Tat in that it cannot be duped for more than one round and does not cooperate again until the loss is made up, but it is better because it does not need a cooperative population to prevail.¹²⁹ But it does more. It illustrates how one might view a system that balances minimum regulatory interference with optimal payoffs.

The studies on the evolution of cooperation may have salutary implications for the investor/issuer game, because it implies that cooperation may become a stable strategy over time. On the other hand, it is not so wonderful for the corporate governance game, because it suggests that directors will tend to be captured by the managers they are supposed to monitor.¹³⁰ The tendency toward

122. RIDLEY, *supra* note 111, at 77.

123. M.A. Nowak et al., *The Arithmetics of Mutual Help*, 272 SCI. AM. 50-55 (1995).

124. See Sigmund, *supra* note 108, at 340 (describing Pavlov strategy as representing "the simplest rule of learning: to repeat something if and only if it was satisfying the last time").

125. *Id.*

126. *Id.*

127. RIDLEY, *supra* note 111, at 80.

128. See Jonathan Bendor & Pitor Swistak, *The Evolutionary Stability of Cooperation*, 91 AM. POL. SCI. REV. 290, 290 (mathematically demonstrating Axelrod's intuition that efficient strategies have an evolutionary advantage).

129. Sigmund, *supra* note 108, at 341.

130. See AYRES & BRAITHWAITE, *supra* note 100, at 63 (modeling regulatory capture and demonstrating that capture changes the payoff matrix so that "firm defection will not lead to the joint defection equilibrium, but to the firm defect:agency [sic] cooperate equilibrium"). This shift is equally likely in the management/director interactions.

cooperation is further illustrated by a game with human players, the Ultimatum Game (and its variations).

C. A Game with Human Players: The Ultimatum Game

Reciprocity only works in small groups where individuals can keep track of past generosity or defection. While these are the kinds of interactions that directors and managers have with each other (in the corporate governance game), their interactions with their investors (in the issuer/investor game) are impersonal. Yet, people often cooperate with people from whom they cannot expect reciprocal favors, and obey rules that are essentially unenforceable, such as pooper-scooper rules for dog owners, and smoking bans in buildings.¹³¹ Although it would be rational to be a free-rider in a complex society, most people do not free-ride. The Ultimatum Game and the Group Exchange Game illustrate this tendency toward cooperation.

Both traits predicted by evolutionary game theory—cooperation and retaliation—can be demonstrated in the Ultimatum Game. Neither of these traits is predicted by neoclassical law and economics. Cooperation in the Ultimatum Game is illustrated through a human tendency toward fairness, in the sense of sharing gains from trade. This tendency toward fairness appears irrational, unless one thinks in terms of the selfish gene theory, and the evolutionary importance of cooperation.¹³² The tendency to retaliate is similarly apparently “irrational,” causing people to incur costs to themselves in order to punish a defector.¹³³

In the Ultimatum Game, two players are isolated from each other.¹³⁴ Player A is given a sum of money and told to propose a share with player B. Player B knows the amount at stake, and if player B refuses the offer, neither player gets anything. If Player B accepts, the money is shared accordingly. No bargaining

131. RIDLEY, *supra* note 111, at 180.

132. See W. D. Hamilton, *The Genetical Evolution of Social Behavior*, 7 J. THEORETICAL BIOLOGY 1, 1-52 (1964) (interpreting the selfless behavior of ants in caring for their sisters' offspring as the behavior motivated by the selfish genes of the ants, because chances of genetic survival are greater by acting selflessly than by procreating individually). Conversely, even relationships that have always been assumed to be altruistic, such as the mother's nurture of her child in utero, have an element of competition. See D. Haig, *Genetic Conflicts in Human Pregnancy*, 68 Q. REV. BIOLOGY 495, 495-31 (1993) (describing the hormonal conflicts between mother and child over blood sugar levels as an example of diverging genetic interests).

133. This paradox of how harmony prevails over selfishness in biological terms is resolved by understanding that for each self-interested gene that would be only too happy to individually self-maximize (in the form of cancer, for example, the paradigmatic mutiny of selfish cells), there are many others that will combine to suppress it. See EGBERT LEIGH, *ADAPTATION AND DIVERSITY* (1971) (“It is as if we had to do with a parliament of genes: each acts in its own self-interest, but if its acts hurt others, they will combine together to suppress it.”).

134. For a description of the Ultimatum Game, see Karl Sigmund et al., *The Economics of Fair Play*, 286 SCIENTIFIC AM. 83 (2002).

is permitted. The logical amount for Player A to offer is any amount greater than zero; if strict rationality were driving the decision, Player B would accept. But in fact, the most common offer made by Player A is around one-half of the original sum, demonstrating a strong tendency toward sharing gains. If the offer is much less than one-half, Player B almost invariably refuses.¹³⁵ This demonstrates a willingness not only to punish the selfish offeror, but also to incur costs in doing so (because neither player receives anything on refusal).¹³⁶ The results of this game are remarkably consistent across cultures.¹³⁷

Cooperation, retaliation, and a tendency toward fairness are context dependent; however, altering the structure of the Ultimatum Game changes these results. For example, if the right to be Player A is earned (say, by high scoring in a test of knowledge or winning the right in a contest), Players A tend to be less generous, and Players B more accepting of low offers.¹³⁸ One of the dangers of an extremely hierarchical “rank and yank” system such as the one at Enron,¹³⁹ is that it may promote self-dealing behavior. Players A also tend to be less generous if Players B must accept the offer (the Dictator Game).¹⁴⁰ Anonymity also has an effect. This has implications for the issuer/investor game, because investors in large publicly held corporations are not known personally to corporate insiders. If Player A’s identity is protected even from the experimenter, 70% offer nothing.¹⁴¹ If several Players B compete to accept the offer, Players A may offer a smaller percent.¹⁴² This also has negative implications for generosity of issuers toward their investors. If the tendency to fairness is undermined by anonymity and hierarchy while self-dealing behavior

135. See *id.* (noting that, on average, two-thirds of offers are between 40 to 50%; only one-quarter are for less than 20% of the pot; more than one-half of responders reject offers of less than 20% of the pot).

136. Acts of punishment appear to violate the conventional economist’s notion of rationality because rational actors are supposed to ignore sunk costs. See Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551, 1562-63 (1998) (referring to sunk costs as letting bygones be bygones). An evolutionary explanation of the desire for punishment is that it disciplines self-maximizers who refuse to cooperate in much the same way as the selfish gene theory proposes that the body’s cells cooperate to attack mutinous cancer cells. See RIDLEY, *supra* note 111, at 180.

137. RIDLEY, *supra* note 111, at 141-42. See Dapluna Lewinson-Zamir, *The Choice Between Property Rules and Liability Rules Revisited: Critical Observations from Behavioral Studies*, 80 TEX. L. REV. 219, 227 & n.33 (2001) (listing studies showing the “wide divergence of experimental results from theoretic predictions . . . in different countries and cultures”).

138. *Id.* at 140; Sigmund et al., *supra* note 134, at 84.

139. See Malcolm Gladwell, *The Talent Myth*, NEW YORKER, July 22, 2002.

140. Surprisingly, in the dictator game, in which Player A proposes a division of the pot, but Player B has to accept, results show that although Player A offers tend to be less generous division than in the Ultimatum Game, most Players A offer a significant percentage of the pot, even if players identities are hidden. KROBOTKIN & ULEN at 1136.

141. RIDLEY, *supra* note 111, at 140-41.

142. Sigmund et al., *supra* note 134, at 84.

is promoted, efficient norms may not prevail. Thus, the structure of the game as well as the tendency to fairness are important.

D. Structuring Games: The Role of Law

Game theory helps to explain why deregulation is misconceived and how collusive behavior between corporate managers and directors can emerge even in the absence of explicit agreement. As Ellikson discovered, social norms may evolve in the absence of law among small communities of repeat players.¹⁴³ But once the community becomes larger and more anonymous, as in the issuer/investor game, or rules and sanctions become less clear, evolutionary game theory emphasizes the importance of initial conditions and argues strongly for a role of law to promote investor confidence.¹⁴⁴

1. *Initial Conditions: The Importance of Structure for the Emergence of Markets.*—Game theory sees the function of law as structuring the interactions between players who may have diverging interests and asymmetrical information.¹⁴⁵ It focuses on what the players in a particular game with specified objectives observe, what they can infer, and what they are likely to do.¹⁴⁶ The structure of the game determines the players' payoffs, their strategies, and the possibility and number of Nash equilibria. Single prisoner's dilemmas are quite different from repeated transactions with the same players. Confronted with defect as a first move, tit-for-tat and Pavlov keep retaliating. Even firm-but-fair spends a lot of time retaliating. None of this is likely to be socially optimal.

Evolutionary game theory suggests that one role of law is to alter the players' incentive structures in order to make socially valuable transactions more likely. For example, in a loan contract in the absence of legal liability for default, a transaction is unlikely to take place even though it would be better for society if it did, because the lender's optimal strategy would be not to lend.¹⁴⁷ Law thus

143. ROBERT C. ELLICKSON, *ORDER WITHOUT LAW* 52-64 (1991).

144. See Nowak et al., *supra* note 95, at 21 (noting that "cooperation is greater in a sedentary than in a mobile population" because "[d]efectors can thrive in an anonymous crowd").

145. Game theory is a way of studying the strategic behavior of interdependent individuals with divergent economic interests. Eric Talley, *Interdisciplinary Gap Filling: Game Theory and the Law*, 22 *LAW & SOC. INQUIRY* 1055, 1057 (1997) (noting that although "law plays an integral role in shaping and regulating the interaction between players who possess possibly divergent interests and beliefs," its effect depends on "the players' individual and common understanding (or lack thereof) of the existence, content, and applicability of legal rules") (reviewing BAIRD ET AL., *supra* note 6). Asymmetric information games are those in which the players are not completely informed about each others' payoffs (but do know that they are incompletely informed). "Incomplete information is the central problem in game theory and the law." BAIRD ET AL., *supra* note 6, at 33.

146. For an elegant description of the fundamental concepts of game theory, see Stephen W. Salant & Theodore S. Sims, *Game Theory and the Law: Ready for Prime Time?*, 94 *MICH. L. REV.* 1839, 1845 (1996) (book review).

147. Assigning numbers to this idea, if we assume a gain from the loan of \$10 to be shared

helps to transform a game with suboptimal equilibria into a game with optimal solutions. Similarly, in impersonal market transactions, investors who believe that the game is rigged and sanctions unavailing may withhold their money from the market. An often-cited justification for the mandatory disclosure regime and the antifraud provisions is that of encouraging investors to participate in the market.

2. *The Role of Sanctions.*—One purpose of legal rules is to sanction and thereby raise or lower the costs for certain behavior.¹⁴⁸ Voluntary acceptance of rules that promote participants' objectives is undoubtedly preferable to sanctions as an economic solution to achieving cooperative behavior.¹⁴⁹ It is certainly cheaper. But game theory explains that stabilizing cooperative interactions requires would-be defectors to face the threat of sanctions and "that those who are charged with identifying defectors and carrying out such sanctions be sufficiently motivated to do so."¹⁵⁰ In repeated interactions, informal norms of reciprocity may emerge, but only if participants know each other and expect that defection will be met with retaliation at the next iteration of the game.¹⁵¹ Enforcement by third parties—courts, for example—may be necessary in the absence of a small community of repeat players.¹⁵²

3. *Solving Information Asymmetries.*—Solving information asymmetry problems is important in game theory as it is in classical economics. The assumption of common knowledge in game theory is a strong one. If one of the players is mistaken about the other player's past move, this can lead to an endless cycle of defection in a population of tit-for-tatters.¹⁵³ Legal rules can help clarify which ambiguous moves count as defection.¹⁵⁴ Bargaining that takes place over

equally, without legal liability for default, if the lender makes no loan, its payoff is 0, and the borrower's payoff is 0; if the lender loans \$100 and the borrower defaults, the lender is out \$110, and the borrower gains \$110; if the borrower repays the loan, the lender's maximum payoff is \$5, and the borrower's is \$5. This example is from BAIRD ET AL., *supra* note 6, at 46. In the presence of liability for default, however, the lender's maximum payoff is \$5 whether the borrower defaults or not, which is preferable to the \$0 the lender would receive if no transaction took place. *Id.*

148. Law and economics goals are to "promote the most efficient allocation of resources—maximizing wealth and minimizing costs." Mark R. Fondacaro, *Toward an Ecological Jurisprudence Rooted in Concepts of Justice and Empirical Research*, 69 UMKCL. REV. 179, 181 (2000).

149. Edward F. McClennon, *Pragmatic Rationality and Rule*, in *EVOLUTION AND PROGRESS IN DEMOCRACIES* 181, 183 (Johann Gotschl ed. 2001) (arguing that a commitment to rules is instrumentally rational as a way of solving coordination problems).

150. *Id.* at 209-10 n.55.

151. *Id.* at 200.

152. *See id.* (observing that increased reporting and punishment of defectors yield increased cooperation if others in the community, who are not necessarily co-players, also retaliate).

153. BAIRD ET AL., *supra* note 6, at 174.

154. *See* Avery Katz, *The Strategic Structure of Offer and Acceptance: Game Theory and the Law of Contract Formation*, 89 MICH. L. REV. 215, 236 (1990) (noting that "modern research on bargaining has revealed that additional theoretical refinements, concerning information and the

time, rather than instantaneously, or that takes place in the absence of information (about the players' situation, the possible outcomes of a strategy, about whether the other player is a cooperator or a defector), often have more than one Nash equilibrium.¹⁵⁵ Because legal rules affect the way information is transferred between parties and the timing of its transfer and can direct the parties toward socially desirable solutions, disclosure and liability rules are important for market players.

a. The problem of nonverifiable information.—Legal rules and third party enforcement mechanisms cannot solve all the problems of information asymmetry. Information may be inaccessible to third parties. Where information is imperfect and mistakes possible (through misreading signals, for example), tit-for-tat may devolve into constant defection. For example, a legal rule prohibiting misrepresentation gives a seller, whose Nash equilibrium might otherwise be to lie about the number of apples in a box, the incentive to disclose the correct number. The number of apples is verifiable, both by the buyer and by the court; however, not all information that the parties need is verifiable. The quality of apples, for example, or their suitability for gift baskets, may not be so easily determined. Similarly, investment contracts (whether explicit or implicit) need some mechanism of ensuring that both parties act optimally even though the court may know less than they do. The possibility of third party mistakes makes adjudication a strategic choice in this situation.¹⁵⁶ This may be one explanation for the consternation caused by plaintiffs' strike suits.

b. Reputation and signaling as a solution to information asymmetries.—Even proponents of deregulation acknowledge the informational asymmetries between managers (who have access to firm information) and investors (who do not), on which mandatory disclosure rules are justified. Investor demand for information coupled with the use of firm quality signaling devices such as outside auditors, reputable investment bankers, managerial stock purchases and dividend payment, are supposed to suffice. Because much of the information for sound investment decisions is unverifiable, however, reputation and signaling were intended to separate the stars from the dregs.

Signaling is a way that people with nonverifiable information can convey that information through the way they act.¹⁵⁷ For a while, at least, people believed that informational quality signaling devices included the use of outside auditors for corporate financial statements, hiring as underwriters reputable investment bankers, managerial stock purchases, and stock dividend payments, for example.

In a wider community without interconnecting social and business ties—the investing public, for example—the problem of nonverifiable information looms

timing of the parties' strategies, need to be imposed on bargaining models if useful results are to be obtained").

155. See *id.* at 235, 237 (discussing the effects of timing and information on Nash equilibria).

156. Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649, 1699 (2000).

157. See BAIRD ET AL., *supra* note 6, at 123-24 (explaining that the use of warranties may be a way of signaling high quality goods, a signal that legal rules requiring warranties may impede).

large. Eric Posner asserts that a wide variety of conduct serves to signal potential partners about the cooperative intentions of a player.¹⁵⁸ Posner argues that merchants investing in expensive office space, correct grooming, social speech, gift-giving, and similar conduct all signal what he calls the discount rate—the player's cooperativeness—to future transactional partners.¹⁵⁹ If, indeed, such conduct is meant to convey one's cooperative nature, however, it is easy to see how such a wide variety of behaviors could be misinterpreted (or even strategically adopted to fake other players out). Similarly, the adoption of one of the formerly Big Five accounting firms did little to ensure the quality of Enron's or WorldCom's financial statements. Signaling from Enron's outside auditors provided no information regarding the quality of the firm because its auditors were themselves conflicted, as the recipients of large amounts of consulting revenue stemming from advice on setting up the very partnerships that were hiding the company's losses).

Reputation also failed to prevent defection: Enron was one of the most widely followed and well-respected companies in the United States. There is some reason to be skeptical about the efficacy of analyst reports as signaling devices. Even in large companies that are followed by analysts, buy recommendations far outweigh sell recommendations, perhaps as a result of analyst overoptimism). Enron, a large, widely followed company elicited no cautionary statements in the financial press despite impending financial disaster. Because Enron executives were selling off their holdings and because Enron created thousands of special purpose entities, analysts now uniformly agree that there were numerous danger signals that should have been reported in the financial press. The Enron debacle and large number of corporate defections provide reasons to doubt the efficacy of reputation and signaling devices in impersonal markets.

Reputational concern may check opportunistic behavior, but its importance will depend on the frequency of similar transactions, the length of the time horizon, and how profitable the transaction.¹⁶⁰ Enron and the other large publicly held corporations that have defected in the issuer/investor game had good reputations. Enron, Global Crossing, and WorldCom were widely followed companies. Moreover, when the situation becomes an end game, the returns to reputation may not be sufficient to prevent opportunistic behavior.¹⁶¹ The threat of bankruptcy may thus diminish the importance of reputation in the decisional calculus.

4. *Channeling Behavior in Coordination Games.*—Law may have yet another function: coordinating players' moves. Coordination problems are persistent in social interactions even where people share an interest in an

158. See ERIC POSNER, LAW AND SOCIAL NORMS 19-24 (2000).

159. *Id.* at 23.

160. See MILGROM & ROBERTS, *supra* note 20, at 139 (discussing the ways in which concern for reputation may prevent defection, but also noting that its value depends on how often it will prove useful).

161. See *id.* at 266 (discussing the end game problem).

efficient outcome, and an equally important function of law is that it may serve as a focal point for individuals to coordinate their actions.¹⁶² The famous stag hunt game, for instance, attributed to Jean Jacques Rousseau, requires the players to coordinate their efforts to achieve optimal payoffs.¹⁶³ The stag hunt game involves two players and two strategies: hunt hare or hunt stag. It takes two to hunt stag, and half a stag is better than a whole hare. Both players would prefer to hunt stag together, but would prefer to hunt hare alone over the possibility of hunting stag alone, and neither knows what the other will do. The Nash equilibria are for both to hunt stag, both to hunt hare; or a random mix of the two.¹⁶⁴ This is known as a complete but imperfect information coordination game. The players know the payoffs and the available strategies, but neither knows what the other will do. It is in both the players' best interests to hunt stag, but without communication, they are unlikely to do so.

The issuer/investor game may be seen as a form of stag hunt. Both issuers and investors will be better off if they pool their resources and "hunt stag" together. Yet, due to fear of the other's defection, each may instead hunt hare alone. Law may provide the necessary signal for issuers and investors to pool their resources. Line item disclosure rules and periodic reporting requirements coordinate the types of disclosure that will be required and provide some way of comparing companies through their disclosure. As Richard McAdams explains, the "law provides a focal point around which individuals can coordinate their behavior."¹⁶⁵

Although a Nash equilibrium is a self-enforcing strategy that cannot be improved upon as long as the other players are following their prescribed strategies,¹⁶⁶ some games, such as the stag hunt game and the hawk-dove game,

162. See McAdams, *supra* note 156, at 1652 (arguing that even a sanctionless proclamation may cause people to change their expectations of what others will do, thus influencing behavior).

163. BAIRD ET AL., *supra* note 6, at 36.

164. *Id.*

165. McAdams, *supra* note 156, at 1651. Although McAdams characterizes his game theory analysis as a form of rational choice theory, he imports a distinctly behavioral economic view of rationality. See, e.g., *id.* at 1662 & 1663 n.38 (claiming an empirical basis for his claims and acknowledging that his account is an expanded form of rational choice in that "individuals are rationally exploiting features of their environment, even if the perceptions of those features are not themselves determined solely by rationality."). The concept of focal point in coordination games is illustrated by a game where a group of people is given the project of meeting in New York City on a given day without being permitted to communicate the time or place of meeting. See THOMAS C. SCHELLING, *THE STRATEGY OF CONFLICTS* (1963). In an empirical test, most people given this task met at noon under the clock in Grand Central Station. *Id.* Although there were an infinite number of Nash equilibria (every time and location), the Grand Central clock at noon acted as a focal point. See BAIRD ET AL., *supra* note 6, at 39.

166. See Talley, *supra* note 145, at 1059 (explaining that the concept of Nash equilibrium is important because "it delineates the behavior in which rational, self-interested actors would plausibly engage").

may have multiple Nash equilibria.¹⁶⁷ If there are two or more equilibrium points, law serves a channeling function, enabling the parties to choose between them (by enabling them to predict which of these strategies will prevail).¹⁶⁸ A common example is choosing on which side of the street to drive. Both right and left are equilibrium points, as is random right and left, but without some coordinating force, there is no a priori way to determine whether the players will choose random sides, right or left.¹⁶⁹

E. Undermining the Role of Law in the Issuer/Investor Game

So much for games. How does this apply to real life? Enron provides a useful lens, although the past two years have provided a bumper crop of other illustrative examples.¹⁷⁰ These corporate defections have followed a period of questionable enforcement of legal rules. A misguided “hands-off” approach to regulation, coupled with obstacles to private enforcement, crippled third party enforcement mechanisms and produced a climate conducive to defection. Deregulation was the order of the day, built on free-market arguments that “[i]f disclosure is worthwhile to investors, the firm can profit by providing it.”¹⁷¹

1. *Globalization and Deregulation.*—Deregulation has been gathering momentum over the past two decades.¹⁷² Two key—and interrelated—developments have spurred deregulation of the capital markets. The first is the internet, with its potential for instantaneous communication with investors around the world. The Internet increasingly is being used as a way to reach

167. See *id.* 1059 & n.6 (describing a simple coordination game of two players with three Nash equilibria in which neither player has any incentive to change strategy: choosing whether to drive on the right or left side of the road, where one solution is that both players choose the right side of the road, the second solution is that both players choose the left; and the third solution is to randomly choose to drive on the right or left).

168. See McAdams, *supra* note 156, at 1659 (explaining that law serves “to coordinate predictions . . . to identify the one course of action that their expectations of each other can converge on” by helping the players to “‘mutually recognize’ some unique signal that coordinates their expectations of each other”).

169. *Id.*

170. WorldCom is being investigated for spectacularly overstating its assets. Kurt Eichenwald & Simon Romero, *Turmoil at WorldCom: The Decision Making*, N.Y. TIMES, June 27, 2002, at A1 (noting overstatements of WorldCom assets by \$3.8 billion). Tyco, GE, IBM, Morgan Chase, all use similar “off-balance-sheet” partnerships to manage their finances. PNC Financial Services Group is being investigated by the SEC for using off-balance sheet entities to hide underperforming assets, as is Dynegy. *Bush Doctrine*, N.Y. TIMES, June 16, 2002, at 12. Managers at Global Crossing and Lucent, like those at Enron, similarly cashed out while withholding information that their companies were going down in flames. ImClone’s former chief executive officer (CEO) has been indicted for insider trading. *Id.*

171. Easterbrook & Fischel, *supra* note 5, at 682.

172. See Steinberg, *supra* note 31, at 348 (observing “widespread accommodations for both domestic and foreign issuers”).

investors, inform them about investment opportunities, as well as to effect trades. Web pages for issuers and securities brokerage firms are proliferating. Frequently, hyperlinks exist between them. There is no reason to suppose that their audience will be limited by national boundaries.

At the same time, globalization, with its accompanying increase in international competition, is forcing a new transnational perspective on many financial institutions, including the securities industry. Foreign issuers have dramatically increased their presence in the U.S. markets, through registered offerings, private placements, and American Depositary Receipts.¹⁷³ Fifteen percent of the listed corporations on the New York Stock Exchange are now foreign issuers, and American investors now plough over \$5 trillion into foreign securities.¹⁷⁴ U.S. issuers have similarly sought out foreign markets.

Reluctant to forgo the diversification benefits to American investors, the SEC has dramatically liberalized its approach to disclosure requirements for foreign issuers.¹⁷⁵ Furthermore, sensitive to the charge that it is creating a dual regime of easy access to U.S. markets for foreigners, coupled with much more onerous disclosure duties for domestic issuers, the SEC has also revisited many of its disclosure requirements for domestic issuers in an attempt to streamline its requirements and lessen the burden on regulated entities.¹⁷⁶ As a result, both foreign and domestic issuers have a much greater choice about the level of

173. American Depositary Receipts are ownership interests in a particular number of securities held by a U.S. bank or trust company. *See generally* Joseph Velli, *American Depositary Receipts: An Overview*, 17 *FORDHAM INT'L L.J.* 38 (1994).

174. U.S. Statistical Abstract 838 (1999).

175. Foreign issuers offering securities in the United States must register using forms F-1, F-2 and F-3 that parallel the registration forms S-1, S-2, and S-3 required of United States issuers. The SEC has lightened their disclosure burdens, however, by permitting financial statements to be prepared according to the accounting principals in their locale, as long as they explain material variations from U.S. GAAP requirements. *See* JAMES D. COX ET AL., *SECURITIES REGULATION: CASES AND MATERIALS* 327 (3d ed. 2001) (discussing the streamlining of disclosure requirements for foreign issuers in the United States). Foreign issuers are also excused from disclosing line-of-business information, and have reduced disclosure obligations with respect to management compensation, and management transactions with the issuer. *Id.* Regulation S facilitates offshore offerings.

176. For example, the accommodations for domestic issuers include:

[T]he adoption of the "accredited purchaser" principle under Regulation D, thereby dismantling the mandatory disclosure framework in offerings made solely to accredited purchasers and relegating such investors to private redress under federal law exclusively to the Section 10(b) anti-fraud remedy; shortening the holding period to resell restricted securities to one year and permitting unrestricted resales by nonaffiliates of the subject issuer after a two-year holding period; [and] authorizing extensive incorporation by reference in registered offerings by less than premier issuers pursuant to the shelf [sic] registration rule and SEC Form S-3

Steinberg, *supra* note 31, at 348-49.

disclosure they will have to provide.¹⁷⁷

In addition to the deregulatory trend of the SEC, Enron illustrates other issues posed by the absence of government regulation. Its on-line energy trading systems functioned without any government oversight because over-the-counter derivatives are not regulated, by either the SEC or the Commodity Futures Trading Commission (CFTC).¹⁷⁸ In testimony before the Senate Governmental Affairs Committee, Professor Frank Portnoy said that Enron employees “used dummy accounts and rigged valuation methodologies to create false profit and loss entries for the derivatives Enron traded.”¹⁷⁹ A bill currently before the Senate would give the CFTC the authority to regulate energy derivatives, rolling back the commodity law exemption for over-the-counter derivatives.¹⁸⁰ However, the CFTC chair, James Newsome, told the Senate Energy and Natural Resources Committee that he remains committed to a deregulated futures industry.¹⁸¹ As a result, it remains unlikely that much will be done to regulate these vehicles.

2. *Litigation Barriers.*—In theory, defecting corporate managers face punishment, not only from government enforcement efforts, but also from private litigants. Private enforcement potentially is available through two major legal avenues: the federal securities laws and state law fiduciary duty obligations. The securities laws place disclosure obligations on corporate management in the form of line item disclosure obligations, reporting obligations, and liability under the antifraud provisions. State fiduciary duties arise from agency principles and include the duty of care¹⁸² and the duty of loyalty.¹⁸³ From these basic precepts, the duty of candor and the duty to disclose arise.¹⁸⁴

The SEC has traditionally refrained from addressing state law corporate governance standards.¹⁸⁵ Two important concerns are the primacy of federal

177. See Alan R. Palmiter, *Toward Disclosure Choice in Securities Offerings*, 1999 COLUM. BUS. L. REV. 1, 3 (1999) (mandatory nature of securities regulation has been eroding for the last twenty years, due to rethinking the “twin tenets that have animated securities regulation for more than half a century—namely, manager informational shirking and investor helplessness”).

178. *Enron Case Highlights Policy Question, How Much to Regulate OTC Derivatives*, 34 Sec. Reg. & L. Rep. (BNA), at S-7 (Mar. 4, 2002) [hereinafter *OTC Derivatives*].

179. *Id.* (quoting Frank Portnoy).

180. S. 1951, 107th Cong. § 1(c) (2002).

181. *OTC Derivatives*, *supra* note 178, at S-8.

182. RESTATEMENT (SECOND) OF AGENCY § 379 (1958) (calling for agents to exercise the care and skill “standard in the locality for the kind of work . . . [and] any special skill” the agent has).

183. *Id.* § 387 (requiring that the agent work “solely for the benefit of the principal in all matters connected with his agency”).

184. See Lawrence A. Hamermesh, *Calling Off the Lynch Mob: The Corporate Director’s Fiduciary Disclosure Duty*, 49 VAND. L. REV. 1087, 1115 (1996) (describing the genesis of the Delaware duty of candor); RESTATEMENT (SECOND) OF AGENCY § 381 (1958) (requiring that an agent has the duty to disclose all matters relating to the agency).

185. See, e.g., *In re Franchard Corp.*, 42 S.E.C. 163 (1964) (declining to mandate disclosure of the directors’ dereliction of duty for anything less than “[o]utright fraud or reckless indifference”

litigation in the securities area and the fear of inconsistent rulings regarding fiduciary duty—corporate governance—issues. Federal securities law requires initial, transaction-specific and periodic disclosure, and its antifraud provisions require that any disclosures made be truthful and not misleading.¹⁸⁶ In contrast, most state corporate governance law requires disclosure only in the event of shareholder action.¹⁸⁷ Under both federal and state law, claims are based on allegations that the corporation made a false or misleading statement. However, in both areas, litigation is becoming more difficult.

a. Statutory barriers.—The Private Securities Litigation Reform Act of 1995 (PSLRA)¹⁸⁸ raised procedural hurdles aimed at reducing perceived abuses of federal class action securities suits,¹⁸⁹ while the Securities Litigation Uniform Standards Act of 1998 (SLUSA)¹⁹⁰ preempted the ability of plaintiffs to take their securities claims to state court (where the hurdles might be lower).¹⁹¹ Together,

amounting to “total abdication” of their role). Under PSLRA, two types of state disclosure actions are preserved: for misrepresentations involving a buy-back or going-private transaction and for misrepresentations in connection with a tender offer, merger, or exchange offer. This is the so-called “Delaware Carve-Out.” See *The Securities Uniform Standards Act of 1997-S 1260: Hearings on S. 1260 Before the Comm. on Banking, Housing and Urban Affairs, Subcomm. on Securities*, 105th Cong. 69, 73 (1998) (noting that “the Delaware courts can resolve these claims . . . in a matter of days or weeks”) (statement of John F. Olson).

186. See, e.g., Jennifer O’Hare, *Director Communications and the Uneasy Relationship Between the Fiduciary Duty of Disclosure and the Anti-Fraud Provisions of the Federal Securities Laws*, 70 U. CIN. L. REV. 475, 479-82 (2002) (discussing the legal framework of the federal disclosure and anti-fraud provisions).

187. Delaware is an exception, requiring that even if shareholder action is not requested, any disclosure that is made must be truthful and not misleading. See *Malone v. Brincat*, 722 A.2d 5, 9 (Del. 1998).

188. Pub. L. No. 104-67, 109 Stat. 737 (1995).

189. The PSLRA additionally provides, among other things, for imposition of penalties on the plaintiff if the lawsuit was found to be frivolous, proportional rather than joint and several liability, a safe-harbor for firms’ forward-looking statements, and choosing lead counsel. *Id.*

190. 15 U.S.C. § 77k(b) (2000). See, e.g., *Lander v. Hartford Life & Annuity Ins. Co.*, 251 F.3d 101 (2d Cir. 2001) (holding that SLUSA applied to a class action alleging misrepresentations in the sale of annuity contracts, which activated removal); *In re Bank Am. Corp. Secs. Litig.*, 263 F.3d 795 (8th Cir. 2001) (explaining that Congress was funneling class-action securities litigation into the federal courts).

191. The purpose of SLUSA was to discourage plaintiffs from circumventing the PSLRA by filing in state rather than federal court, to encourage disclosure of forward-looking information, and to establish uniform rules for securities class actions. H.R. CONF. REP. NO. 105-803, at 13 (1998). SLUSA preempts state law entirely where it applies, so that not only do plaintiffs lose their right to bring securities claims in state courts, they also lose their right to litigate state claims in federal court through supplemental jurisdiction. O’Hare, *supra* note 186, at 489. SLUSA preempts state law securities class actions based on “misrepresentations or omissions of material fact in connection with the purchase or sale of covered securities; or . . . that the defendant used or employed any manipulative or deceptive device in connection with the purchase or sale of covered

these statutes attempted to protect businesses from plaintiffs' attorneys and coercive settlements.¹⁹² Proponents of PSLRA argued that much pre-PSLRA plaintiffs' securities litigation was frivolous, but that because of high legal defense fees, even non-meritorious suits were settled.¹⁹³

The courts, however, were already well-equipped to handle this problem. Federal courts are no strangers to motions to dismiss. Difficult discovery issues and the handling of sensitive materials are a frequent phenomenon in federal courts.¹⁹⁴ Judges can and should manage discovery.¹⁹⁵ There is little empirical evidence supporting these statutes: the 1995 Act was part of the general tort reform movement, in large part instigated by the insurance, hi-tech venture, and accounting lobbies,¹⁹⁶ and the 1998 Act was based on the dubious and controversial claim that litigants were circumventing the intent of Congress by

securities." SLUSA, Pub. L. No. 105-353, §101(a)(1) & (b)(1), 112 Stat. 3227. SLUSA preempts "covered class actions," which it defines as suits "on a representative basis" or on behalf of "more than 50 persons." *Id.* This is a significant barrier to litigation, because most securities fraud actions are prohibitively expensive for individual investors, so that they tend to be brought as class actions. The "Delaware Carve out," however, exempts shareholder derivative actions and claimed breaches of fiduciary duty, even when they involve securities disclosures. SLUSA §16(d) (exempting certain covered class actions). *See Arlia v. Blankenship*, 234 F. Supp. 2d 606, 612-13 (S.D. W. Va. 2002) (derivative claim for breach of fiduciary duty exempted from SLUSA under § 16(d)); *Dediger v. Tallman*, 2000 WL 268309 (Del. Ch. Feb. 25, 2000) (referring to § 16(d) as the "Delaware carve-out"). A shareholders' derivative action is brought on behalf of the corporation for harm to the corporation. *See Roberta Romano, Corporate Governance in the Aftermath of the Insurance Crisis*, 39 EMORY L.J. 1155, 1156-57 (1990) (discussing the difference between direct and derivative claims).

192. *See* 141 CONG. REC. S17,933-04, S17,954 (daily ed. Dec. 5, 1995) (statement of Mr. Dodd). The purpose of the PSLRA was to curb perceived abuses in private securities actions. *See* H. R. Conf. Rep. No. 104-369, at 32 (1995). PSLRA also provides a statutory safe harbor for forward looking statements. Securities Act of 1933 § 27A(c), 15 U.S.C. § 77z-2(c) (2000); Securities Exchange Act of 1934 § 21E(c)(1)(A)(I), 15 U.S.C. § 78u-5(c) (2000). *See* H.R. REP. NO. 104-369, at 43 (1995) ("Understanding a company's own assessment of its future potential would be among the most valuable information shareholders and potential investors could have about a firm.") (remarks of former SEC Chair Richard Breeden).

193. *See, e.g.,* Ahiq Ali & Sanjay Kallapur, *Securities Price Consequences of the Private Securities Litigation Reform Act of 1995 and Related Events*, 76 ACCT. REV. 431-60 (2001) (noting arguments that PSLRA was needed to deter nuisance suits).

194. *See* Joel A. Seligman, *The Merits Do Matter*, 108 HARV. L. REV. 438, 438 (1994) (arguing that pre-PSLRA courts were well equipped to dismiss nonmeritorious suits).

195. *See, e.g.,* Crawford-El v. Britton, 523 U.S. 574, 598 (1998) (observing that the trial judge has "broad discretion to tailor discovery narrowly and to dictate the sequence of discovery").

196. *See* Hillary A. Sale, *Heightened Pleading and Discovery Stays: An Analysis of the Effect of the PSLRA's Internal-Information Standard on '33 Act and '34 Act Claims*, 76 WASH. U. L.Q. 537, 556 (1998) (explaining the genesis of the PSLRA as part of the general tort reform movement, in Congress's "Contract with America").

taking their claims to state court.¹⁹⁷

PSLRA requires the plaintiff to “state with particularity facts giving rise to a strong inference that the defendant acted with the required state of mind.”¹⁹⁸ Upon the filing of a motion to dismiss, PSLRA provides an automatic stay of discovery.¹⁹⁹ As Hillary Sale noted, this combination is “outcome determinative and, if strictly applied, virtually impossible to meet” in private securities litigation.²⁰⁰

Although previous pleading standards (specifically Rule 9(b) of the Federal Rules of Civil Procedure) also required pleading fraud with particularity, pre-PSLRA plaintiffs were able to obtain needed internal company information through the Federal Rules of Civil Procedure’s liberal discovery provisions.²⁰¹ In enacting PSLRA, Congress expected to deter strike suits²⁰² by requiring dismissal if plaintiffs fail initially to plead not only the reason or reasons why an alleged misstatement was misleading when made but also facts giving rise to a strong inference that the defendants acted with scienter.²⁰³ Without discovery, however, plaintiffs are unable to obtain documents such as board meeting notes, internal audit documents, or internal memoranda—the very documents most plaintiffs need to document their claims.²⁰⁴ As a result, not only strike suits but also meritorious fraud claims may be quelled.²⁰⁵

197. Mark Klock, *Lighthouse or Hidden Reef? Navigating the Fiduciary Duty of Delaware Corporations’ Directors in the Wake of Malone*, 6 STAN. J. L. BUS. & FIN. 1, 31 (2000).

198. 15 U.S.C. § 78u-4(b)(2) (2000).

199. See Securities Act of 1933 § 27A(f), 15 U.S.C. § 77z-2(f) (2000); Securities Exchange Act of 1934 § 21D(6)(3)(B), 15 U.S.C. § 78u-4b(3)(B) (2000).

200. Sale, *supra* note 196, at 538.

201. *Id.* (noting the change wrought by PSLRA’s pleading and stay rules). Professor Sale explains that “in order to meet the common-law pleading standards developed by the Ninth and Second Circuits prior to the [PSLRA], plaintiffs needed access to internal company information” which they obtained “by engaging in discovery and then repleading their complaints.” *Id.* at 539. Former-President Clinton expressed a similar concern in his veto message, stating that the bill would have “the effect of closing the courthouse door on investors who have legitimate claims.” 141 CONG. REC. H15,214, H15,214 (daily ed. Dec. 20, 1995) (statement of President Clinton). Then-SEC Chairman Arthur Levitt similarly warned that the legislation would undercut investors’ rights. *Id.* at H15,220.

202. A strike suit is defined by one business dictionary as a “derivative action, usu[ally] based on no valid claim, brought either for nuisance value or to obtain a settlement.” A HANDBOOK OF BUSINESS LAW TERMS 579 (Bryan A. Garner ed. 1999).

203. 1934 Act § 21D(b)(1)-(2).

204. See, e.g., *In re Silicon Graphics, Inc. Secs. Litig.*, 970 F. Supp. 746, 767-68 (N.D. Cal. 1997) (finding allegations of insider trading together with dates and contents of negative internal reports insufficient absent titles, dates, authors, recipients, contents and sources of reports).

205. See Sale, *supra* note 196, at 564 (contending that “the Reform Act is likely to allow only the more flagrant and obvious cases of securities fraud to proceed past a motion to dismiss, while being overinclusive in its elimination of cases where it is more difficult to identify, and therefore to plead, fraud” which “is likely to result in unredressed fraud”).

The worry impelling passage of PSLRA was that a typical securities fraud case was filed not because the plaintiff had discovered fraud, but instead because there had been a sudden drop in stock price.²⁰⁶ However, only a small fraction of companies whose stocks plummet experience such filings.²⁰⁷ Moreover, the pre-PSLRA courts were well aware of this factor and used the particularity requirements to screen cases that were merely responses to a decrease in price.²⁰⁸ Nor is there any a priori reason to believe that securities fraud allegations are beyond the courts' competence to parse.²⁰⁹

Moreover, solicitude for the inability of businesses to defend themselves from such suits appears unfounded. The costs of insurance and litigation defense were argued as grounds for the bill, but these costs were never substantiated.²¹⁰

206. See John W. Avery, *Securities Litigation Reform: The Long and Winding Road to the Private Securities Litigation Reform Act of 1995*, 51 BUS. LAW. 335, 339 (1996) (discussing the arguments of reform advocates, who contended that any drop of 10% of the stock price prompted fraud claims).

207. See, e.g., *Securities Litigation, 1994: Hearings on H.R. 417 Before the Subcomm. on Telecomm. and Fin. of the House Comm. on Energy and Commerce*, 103d Cong. 118, 119 (1994) (testimony of Donald C. Langevoort, Lee S. and Charles A. Speir Professor of Law, Vanderbilt Univ. School of Law) (arguing for reform, but suggesting that there was no meaningful correlation between stock-price drops and fraud claim filings); 103d Cong. 267 (1994) (testimony of Leonard B. Simon, attorney); 141 CONG. REC. S17,933-04, S17,951 (daily ed. Dec. 5, 1995) (statement of Mr. Bryan) (citing University of California study demonstrating that of 589 stocks that dropped 20% in price within a five-day period, only 3% were sued). Even the bill's proponent, Senator Domenici, could say no more than that 21% of securities fraud cases were filed within forty-eight hours of a drop in price. 141 CONG. REC. S17,965-03, S17,968 (daily ed. Dec. 5, 1995) (statement of Mr. Domenici) (citing study by National Association of Securities and Commercial Law Attorneys that found that 21% of fraud cases were filed within forty-eight hours of a price drop).

208. See Sale, *supra* note 196, at 544 (discussing courts' response to the fear that nonmeritorious suits were being filed simply because the stock price dropped, in particular the requirement that plaintiffs plead facts to show that the difference was attributable to fraud).

209. This is not a suggestion that courts are unconcerned about the difficulties presented. Courts certainly have expressed concern about adjudicating competing interests in the absence of statutory or regulatory guidance. See, e.g., *In re Time Warner Inc. Sec. Litig.*, 9 F.3d 259, 263 (2d Cir. 1993) (noting the "inevitable tension between two powerful interests" and complaining that "the adjudication process is not well suited to the formulation of a universal resolution of the tensions" in the absence of statutory or regulatory guidance); *DiLeo v. Ernst & Young*, 901 F.2d 624, 627 (7th Cir. 1990) (recognizing that "only a fraction of financial deteriorations reflect fraud"). Notably, however, courts frequently express dismay at resolving complex issues in a wide variety of settings. See, e.g., Erica Beecher-Monas, *Blinded by Science: How Judges Avoid the Science in Scientific Evidence*, 71 TEMP. L. REV. 55 (1998) (discussing the courts' rhetoric of dismay at having to decide the admissibility of expert testimony and opining that courts are quite capable of making such determinations).

210. For example, in the "Joint Explanatory Statement" the managers of the House and Senate, in support of their recommendation, proffered only the statement of "the general counsel of an investment bank" regarding high discovery costs. See Conference Report on H.R. 1058, with Joint

The argument that businesses were being held up for ransom and forced to settle meritless litigation was wholly unsupported by empirical data. Subsequently, empirical studies have shown that most pre-PSLRA cases settled and that settlements were tied to the merits.²¹¹ In addition, pre-PSLRA cases routinely settled for well under 20% of the potential investor losses.²¹²

Although the number of securities fraud cases has not fallen post-PSLRA,²¹³ this may be due to an increase in meritorious securities fraud cases that can obtain the necessary factual basis without discovery. It says nothing about the effect of PSLRA on meritorious cases that cannot obtain such information without discovery.²¹⁴ A number of changes have occurred in the kinds of cases filed post-PSLRA. As the empirical study of Mukesh Bajaj and his co-workers demonstrated, the number of accounting fraud (including revenue restatements), improper accounting practices and improper revenue recognition cases filed increased, while the percentage of material omissions cases decreased somewhat.²¹⁵ Perhaps these cases are less difficult to substantiate pre-discovery. One interesting and unanticipated result is that the settlement rate decreased post-PSLRA from 57.6% within four years of filing to 26% within four years of filing.²¹⁶ Thus, it would appear that survival of the PSLRA dismissal process has made litigants more willing to bring their cases to trial. However, it is difficult to draw firm conclusions from these data because of the considerable variation in the data over time.²¹⁷ Another unanticipated consequence of impeding meritorious lawsuits is that it may reduce incentives for honest disclosure.²¹⁸

Statement of Conference Comm., H.R. REP. No. 104-369, 104th Cong., 1st Sess., *reprinted in* 27 Sec. Reg. & L. Rep. (BNA), at 1893 (Dec. 1, 1995).

211. See Stephen P. Marino & Renee D. Marino, *An Empirical Study of Recent Securities Class Action Settlements Involving Accountants, Attorneys, or Underwriters*, 22 SEC. REG. L.J. 1159 (1994) (demonstrating that settlements are tied to the merits of the case).

212. See Mukesh Bajaj et al., *Securities Class Action Settlements: An Empirical Analysis*, working paper, available at http://securities.stanford.edu/research/studies/20001116_SSRN_Bajaj.pdf, at 12 (Nov. 16, 2000) (noting that the mean settlement ratio to potential investor loss amounts varied from 7.1% for cases filed in the Fourth Circuit to 21.9% for cases filed in the Tenth Circuit).

213. See *id.* at 3 (noting that the number of federal cases filed had “reached an all-time high of 248 filings” in 1998).

214. See Perino, *supra* note 4, at *22 (acknowledging that it is impossible to know whether meritorious suits are being chilled and observing that “while it is difficult to assess the claim that there is more fraud now than there was prior to the PSLRA, the other explanations for the apparent increase in filings appear to be inadequate”); Ribstein, *supra* note 2, at 17 (arguing that “reduced liability risk may have encouraged fraudulent or shirking behavior in marginal situations where defrauding insiders or lax auditors had persuaded themselves that the likelihood of detection was low . . . [which] argues for reversing some aspects of the PSLRA”).

215. Bajaj et al., *supra* note 212, at 4.

216. *Id.* at 5.

217. *Id.* at 13.

218. See Seligman, *supra* note 194 (arguing that corporate officers and advisors will have

This is substantiated by some evidence that shareholders consider PSLRA harmful.²¹⁹

b. Judicial barriers.—PSLRA and SLUSA are not the only new barriers to securities actions. In addition to statutory changes in the legal landscape, the Supreme Court, in *Central Bank of Denver v. First Interstate Bank of Denver*,²²⁰ held that private fraud actions under the Securities Exchange Act section 10(b) and SEC Rule 10b-5 cannot be brought under an aiding and abetting theory.²²¹ Instead, they must be based on primary liability—the statements must be attributable to the defendant.²²² The statements in reports filed with the SEC are signed by the directors; hence, their liability for material misstatements or omissions is not changed by the *Central Bank* decision. Nor is primary liability for secondary actors such as accountants and lawyers changed. They are still responsible for statements that are attributable to them.²²³

What the Court did change, however, was the importance of being able to pursue claims against the primary actors—the very thing that PSLRA subsequently limited. Prior to *Central Bank*, courts had widely accepted the viability of secondary liability.²²⁴ The courts have extended the rationale of *Central Bank* to conspiracy liability as well as aiding and abetting.²²⁵ Although *Central Bank* makes it clear that the statements attributable to a firm outsider, like an accountant or a lawyer, may still be the source of primary liability, it is

fewer incentives to disclose if it becomes more difficult to bring meritorious actions).

219. See Ali & Kallapur, *supra* note 193 (studying stock price changes as a result in announcements relating to PSLRA and concluding that the evidence demonstrates shareholder concern that PSLRA may have harmful effects). Ali and Kallapur examined the results of prior studies that had concluded that stockholders considered PSLRA beneficial, and found that “the timing of multiple confounding events makes the interpretation of these daily returns ambiguous . . . [and] additional analyses . . . are largely inconsistent with their interpretation.” *Id.*

220. 511 U.S. 164 (1994).

221. *Id.* at 191.

222. *Id.*

223. The Court did not delineate the kinds of activities that would result in primary liability for secondary defendants. See *id.* at 177. Instead, it merely observed that in some circumstances, accountants, lawyers and banks, could be primarily liable for material misstatements on which investors rely:

Any person or entity, including a lawyer, accountant, or bank, who employs a manipulative device or makes a material misstatement (or omission) on which a purchaser or seller of securities relies may be liable as a primary violator . . . assuming all of the requirements for primary liability under Rule 10b-5 are met.

Id.

224. See, e.g., Jill E. Fisch, *The Scope of Private Securities Litigation: In Search of Liability Standards for Secondary Defendants*, 99 COLUM. L. REV. 1293, 1297 (1999) (observing that *Central Bank* “came with little warning—courts and commentators had widely accepted the validity of aiding and abetting liability”).

225. See, e.g., *Dinsmore v. Squadron*, 135 F.3d 837, 838 (2d Cir. 1998); *In re GlenFed, Inc. Sec. Litig.*, 60 F.3d 591, 592 (9th Cir. 1995).

less clear where primary liability ends and secondary liability begins.²²⁶ This means, at least in the Second and Eleventh Circuits, that a secondary actor cannot be held liable for clients' disclosure statements, even if they participated in crafting those statements.²²⁷

These impediments have the unfortunate result of chilling deterrence of many of the abuses that Enron illustrates.²²⁸ As it stands now, there is a void in the protection of defrauded shareholders and the integrity of the mandated disclosure system, especially where those primarily liable are insolvent.²²⁹ Outside professionals are expected to serve gatekeeper roles in the disclosure system.²³⁰ The question asked after the savings and loan debacle: "Where were the lawyers and accountants?" is equally apt in the Enron and WorldCom. Without the threat of secondary liability, the answer is far more likely to be "asleep at the wheel." Sarbanes-Oxley did little to remedy the problem. The SEC adopted a reporting rule for attorneys in response to Sarbanes-Oxley, under which lawyers must report wrongdoing up the corporate ladder and if no corporate response is forthcoming, withdraw.²³¹

Securities law is not the only source of mandatory disclosure regulation; state law corporate governance statutes also require disclosure of some information that a firm's managers might otherwise prefer to keep to themselves.²³² Most

226. See Fisch, *supra* note 224, at 1300 (noting that liability for one's own representations is primary rather than secondary liability).

227. See, e.g., *Ziembra v. Cascade Int'l, Inc.*, 256 F.3d 1194, 1205 (11th Cir. 2001) (neither law firm nor accounting firm could be liable for statements unless they are "publicly attributable" to them at the time of the investment decision); *Wright v. Ernst & Young LLP*, 152 F.3d 169, 175 (2d Cir. 1998), *cert. denied*, 525 U.S. 1104 (1999) (outside auditor can incur liability only for those statements attributable to it). In the Third Circuit, on the other hand, a lawyer who significantly participates in drafting documents may become primarily liable as an author of those documents. See *Klein v. Boyd*, [1997-1998 Transfer Binder] Fed. Sec. L. Rep. (CCH) P 90,136, 90,137 (3d Cir. Feb. 12, 1998), *vacated on grant of reh'g*, No. 97-1143, 1998 U.S. App. LEXIS 4121, at *1 (Mar. 9, 1998) (securities lawyer's participation in drafting client disclosure documents may result in primary liability even without attribution).

228. Cf. Steinberg, *supra* note 31, at 350 (noting that the "federal courts, most particularly the Supreme Court, have also been influential during the past twenty-five years in restricting investor access to redress"). Although Professor Steinberg suggests that this may have had the "concomitant effect of encouraging capital formation," he provides no evidence of such encouragement, and he is unequivocal that "[i]nvestor protection has been diminished." *Id.* at 350-51.

229. Seligman, *supra* note 194, at 456.

230. See Fisch, *supra* note 224, at 1314 (explaining that "the securities disclosure system is premised upon the supposition that outside professionals will be involved in the disclosure process . . . as a substitute for greater supervision by government regulators").

231. See News Release, SEC Adopts Attorney Conduct Rule Under Sarbanes-Oxley Act, 2003 WL164827 (SEC Jan. 23, 2003).

232. See Merritt B. Fox, *Required Disclosure and Corporate Governance*, 62 LAW & CONTEMP. PROBS. 113, 114 (1999) (noting the dual regime). Full disclosure is a pre-requisite for shareholder ratification of director actions. See, e.g., *Smith v. Van Gorkom*, 488 A.2d 858 (Del.

states require full disclosure in connection with shareholder action. There are very few occasions for such action, however: shareholders vote for directors, major corporate changes, and occasionally to ratify otherwise questionable director actions. Delaware is one of the few states that has explicitly imposed a duty of candor on directors requiring truthful disclosure to shareholders even in the absence of requested shareholder action.²³³ In *Malone v. Brincat*,²³⁴ shareholders alleged that the directors of Mercury Finance Company, a Delaware corporation, knowingly disseminated false financial information in required periodic disclosures over a period of four years, aided and abetted by the firm's auditors, at the end of which period the firm lost virtually all its value.²³⁵ Reluctant to usurp the federal authority over the securities markets, the Chancery Court dismissed, finding that there was no request for shareholder action.²³⁶ Although it affirmed the dismissal, the Delaware Supreme Court permitted the plaintiffs to refile, holding that deliberately misinforming shareholders violates directors' fiduciary duties, even in the absence of a request for shareholder action.²³⁷ Thus, under Delaware state law, a false statement knowingly made will subject a director to liability, whether or not the statement was made in connection with a request for shareholder action.²³⁸ This may deter conscious wrongdoing (and subsequent lying to cover it up).

The real problem, however, is oversight. Although the firm is to be managed "by or under the direction of" the board of directors,²³⁹ the courts have been reluctant to impose monitoring duties on the board.²⁴⁰ If directors make

1985) (requiring full disclosure for shareholder ratification of director actions).

233. See, e.g., *Potter v. Pohlad*, 560 N.W.2d 389, 389 (Minn. Ct. App. 1997) (declining to impose duty of candor in absence of request for shareholder action).

234. 722 A.2d 5 (Del. 1998).

235. *Id.* at 8.

236. *Id.* (holding that if the release of inaccurate information into the marketplace was unconnected with a Delaware corporate governance issue, the claim was only viable under federal law).

237. *Id.* at 10.

238. *Id.* But see *Hamermesh*, *supra* note 184, at 1173-74 (contending that directors should not be liable under state fiduciary duty law for statements that do not elicit shareholder approval).

239. DEL. CODE ANN. tit. 8 § 141(a) (1991) (providing for that deviate from these norms); N.Y. Bus. Corp. L. § 701 (McKinney 1986) (accord); REVISED MODEL BUS. CORP. ACT §8.01 (3d ed. 1994) (accord).

240. See JAMES D. COX ET AL., *CORPORATIONS* 195 (1997) (noting that "requirements that the directors be attentive and reasonably informed are procedural in nature; the substantive requirement is that their decision have a 'rational basis' . . . [b]ut public policy considerations . . . have caused the courts not to apply these standards rigorously"). The few cases that do impose oversight duties do so in the context of banking, financial and insurance firms, which arguably have a higher fiduciary obligation. See, e.g., *Francis v. United Jersey Bank*, 432 A.2d 814 (N.J. 1981). But see *Brane v. Roth*, 590 N.E.2d 587 (Ind. Ct. App. 1992) (noting that directors of grain cooperative breached their duty of care in failing to adequately hedge in grain market or supervise management); *Robinson v. Watts Detective Agency, Inc.*, 685 F.2d 729 (1st Cir. 1982) (holding

egregiously bad decisions because they were asleep at the wheel,²⁴¹ to what extent are they entitled to judicial deference? In the Enron situation, for example, there appear to have been egregious monitoring failures by the board.²⁴² To keep judges from second-guessing director decisions that turn out, in hindsight, to be bad decisions, the business judgment rule protects directors from liability for foolish decisions.²⁴³ Although *Smith v. Van Gorkom*²⁴⁴ imposed a process requirement that directors obtain expert advice and inform themselves about management proposals, it did little to ensure that directors do anything other than go through the motions of informing themselves.²⁴⁵ Even if the Enron directors had demanded the deal sheets that were supposed to inform them of intra-firm conflicts, there is no assurance that they would have reached a different disclosure decision or done anything to prevent the conflicts (since even when apprised of conflicted transactions they waived their own rules). Moreover, although *Caremark*²⁴⁶ (at least, in dicta) appears to enforce a duty to ensure that information flows to the directors, it does not mandate that the directors either establish a compliance program (although they must examine and discuss the issue) or that they act upon the information that they receive.²⁴⁷ The Enron directors had a sophisticated compliance program; they simply either ignored its requirements or ignored the information that they had obtained.²⁴⁸

Moreover, a director's duty to disclose has been significantly curtailed by a

that officer-directors of security agency breached their fiduciary duty by neglecting the business).

241. Cf. *Boards of Directors: Primary Responsibility for Recent Corporate Scandals Rests with the Board of Directors According to Panel Members at ABA Meeting*, 17 CORP. COUNS. WKLY. 258 (Aug. 21, 2002) (reporting the remarks of Neil Minow that the boards were "at the center of the perfect storm").

242. See Ribstein, *supra* note 2, at 3-7 (discussing oversight failures and noting that Enron's Special Committee acknowledged the board's monitoring failures).

243. See MODEL BUS. CORP. ACT § 8.31 (directors have no liability except for actions taken in bad faith, without reasonable belief, without adequate information, or unless they failed to exercise oversight for an extended period); BAINBRIDGE, *supra* note 14, at 296.

244. 488 A.2d 858, 890 (Del. 1985) (holding directors had failed to disclose the "fact that the Board had no reasonably adequate information indicative of the intrinsic value of the Company").

245. *But see* BAINBRIDGE, *supra* note 14, at 281 (arguing that *Van Gorkom* "created a set of incentives consistent with the teaching of literature on group decisionmaking" by encouraging "inquiry, deliberation, care, and process"). The major consequence of *Van Gorkom*, however, appears to have been a "full employment act" for investment bankers and other experts rather than a genuine search for critique.

246. *In re Caremark Int'l Inc. Derivative Litig.*, 698 A.2d 959 (Del. Ch. 1996) (outlining an obligation of directors to set up a law compliance program to meet their monitoring duties).

247. Rather, the Chancery Court held that because the Caremark directors had taken active steps by adopting an ethical code, organizing a confidential reporting system, appointing a compliance officer and training employees, that was enough to preclude liability. *Id.* at 970.

248. See Enron Report, *supra* note 58, at 14 (explaining that "[h]igh risk accounting practices, extensive undisclosed off-the-books transactions, inappropriate conflict of interest transactions, and excessive compensation plans were known to and authorized by the board").

triad of available protections: exculpation, indemnification, and insurance.²⁴⁹ Starting in the late 1980s, corporate codes began to permit charter provisions exculpating directors for negligent conduct.²⁵⁰ Most public corporations have amended their charters to include these provisions.²⁵¹ In order to overcome exculpatory provisions, plaintiffs had to show the directors' bad faith in making the disclosure decision.²⁵² Moreover, the duty to disclose does not extend to corporations, so that if an exculpatory provision applies, shareholders cannot simply sue the corporation in lieu of the directors.²⁵³

As a result of the statutory and judicial litigation barriers outlined above, in the kinds of financial nondisclosures that appear to be at the root of many of the recent corporate defections, shareholders (who might wish to bring their claims against directors under the federal securities laws, for recklessly making a misleading statement in the Audit Committee Report,²⁵⁴ for example) would have a difficult time meeting the PSLRA pleading standards. They would not be able to establish a state law fiduciary duty claim either because, to be liable, a director must knowingly misrepresent engaging in the described activities.²⁵⁵

249. See, e.g., BAINBRIDGE, *supra* note 14, at 232 (discussing the triad of protections for directors).

250. See Mae Kuykendall, *Symmetry and Dissonance in Corporate Law: Perfecting the Exoneration of Directors, Corrupting Indemnification and Straining the Framework of Corporate Law*, 1998 COLUM. BUS. L. REV. 443, 467 (discussing the development of corporate codes permitting director indemnification).

251. See BAINBRIDGE, *supra* note 14, at 300 (discussing the evolution of state exculpatory statutes and their adoption by corporations). In addition to exculpatory provisions, "all states have statutory provisions authorizing director indemnification to some degree." *Id.* at 301. Thus, expenses for legal defense, and the advancement of those expenses, are widely available. *Id.* at 304.

252. See *Zirn v. VLI Corp.*, 681 A.2d 1050, 1061-62 (Del. 1996) ("The record reveals that any misstatements or omissions that occurred were made in good faith."); see also *Arnold v. Soc'y for Sav. Bancorp, Inc.*, 650 A.2d 1270 (Del. 1994) (concluding that although the proxy statements at issue contained an omission of material fact, the directors were immune from liability due to the corporation's exculpatory charter provision).

253. See, e.g., *Arnold v. Soc'y for Sav. Bancorp, Inc.*, 678 A.2d 533, 534 (Del. 1996) (explaining that shareholders seeking to hold the corporation liable for proxy statements containing materially misleading misstatements were precluded from suit because the federal proxy rules provided a remedy).

254. Item 306 of Regulation S-K and S-B and Item 7(d)(3) of Schedule 14A require firms listed on a national exchange to provide an Audit Report in the company's proxy statement disclosing whether the audit committee reviewed audited financial statements, discussed them with management, discussed matters with the independent auditor, and recommended that they be included in the annual report. See 17 C.F.R. §§ 229.306(a), 240.14a-101 (2001).

255. See, e.g., Gregory S. Rowland, Note, *Earnings Management, the SEC, and Corporate Governance: Director Liability Arising from the Audit Committee Report*, 102 COLUM. L. REV. 168, 168, 196-97 (2002) (observing that the "directors would merely need to read the financial statements . . . engage in certain discussions regarding those statements . . . and obtain from (and discuss with) the outside auditor a statement of that outside auditor's independence" and concluding

III. BUREAUCRATIC ACCOUNTABILITY

An intriguing question is why, given that directors know that their investors need fundamental financial information, given that regulations make at least a minimum of disclosure about corporate finances mandatory, and given the market forces urging corporate signaling of trustworthiness to investors, corporate cover-ups occur. If investors want their firms to engage in some risky behavior in order to achieve profits, why cover it up? If the fear is that investors will walk away, why do it? Cover-ups may arise from incentives to act self-interestedly: there may simply be some directors who are “bad apples,” strategically defecting and who—as game theory illustrates—need to be punished to reestablish cooperation in the investor/issuer game. Alternatively, directors who abdicate their duties to investors may have such strong incentives to act cooperatively with management that they are willing to forego their monitoring duties. On the other hand, directors may have convinced themselves that they were acting cooperatively (consciously acting in what they believed at the time to be in the best interests of the firm and its stakeholders), but were mistaken about their own strategic payoff or about the other players’ strategies or payoffs.

In the Enron example, the directors at Enron could have made a real difference by refusing to approve financial statements and other disclosures, refusing to approve transactions that had no economic substance, refusing to waive provisions of their corporate code (such as the conflict of interest provisions) and ultimately, by firing officers. In their defense, the directors claimed that they had been misinformed by management.²⁵⁶ Nonetheless, the Senate Subcommittee concluded that “overall the Board received substantial information about Enron’s plans and activities and explicitly authorized or allowed many of the questionable Enron strategies, policies and transactions now subject to criticism.”²⁵⁷ No one has accused the Enron directors of directly lining their own pockets. It is still possible that the Enron board members were “bad apples,” run amok with self-interest. For example, board members may have had a conflict of interest with respect to approving questionable accounting practices and disclosure failures because they were paid partly in stock options. Enron board members were compensated at about \$350,000 per year (nearly twice the national average), in cash, restricted stock, phantom stock units (deferred cash

that “[t]oo many corporate managers, auditors, and analysts are participants in a game of nods and winks”).

256. Throughout the Senate hearings, the directors who were interviewed maintained that management withheld key information from them. See Senate Permanent Subcommittee on Investigations Report, *The Role of The Board of Directors in Enron’s Collapse*, SR 107-70, 107th Cong., 2d Sess., July 8, 2002 at 45.

257. *Id.* at 13, 14 (“High-risk accounting practices, extensive undisclosed off-the-books transactions, inappropriate conflict of interest transactions, and excessive compensation plans were known to and authorized by the Board.”).

payments linked to the price of stock) and stock options.²⁵⁸ The incentives to cooperate with management may have swamped the directors' incentives to monitor. They may have been reluctant for reputational or strategic reasons to do anything that would jeopardize their relationship with management.

In an earlier article, I argued that, given the information that they had, the directors may have convinced themselves that they were acting in the best interests of the corporation.²⁵⁹ There, I argued that bounded rationality, the theory that human thinking evolved through repeated interactions with the environment, had consequences not only for what happened at Enron, but also for the success of the Sarbanes-Oxley Act's solution.²⁶⁰ Heuristics and group interactions may affect corporate actions in predictably adverse ways.²⁶¹ I argued that understanding the operation of these heuristics in the organizational context and the conditions that make them more likely to occur may also illuminate ways to counter these tendencies.²⁶²

This Article extends the argument that these adaptive mechanisms, aiding quick and satisficing decisionmaking, may have effects on three aspects of the corporate climate that foster defections such as those at Enron. First, the overconfidence bias delineated by cognitive psychology as being especially prevalent in sales and marketing environments (and Enron at the time of its demise was primarily a derivatives trading entity) may have created a tendency to overrate the company's overall prospects, contributions and talents, making

258. Enron Report, *supra* note 58, at 11. Stock options are a worrisome source of pay because they enable the board member to benefit from stock gains without any risk of loss. *See id.* at 56.

259. *See* Erica Beecher-Monas, *Corporate Governance in the Wake of Enron: An Examination of the Audit Committee Solution to Corporate Fraud*, 55 ADMIN. L. REV. 357, 391 (arguing that “[g]roup dynamics under conditions of relative loss coupled with systemic cognitive biases that affect decisionmaking and behavior in a context of uncertainty help explain what happened at Enron, and also suggest the fallacy of the legislative solution”).

260. *See generally* Simon; *see* David Liabson & Richard Zeckhauser, *Amos Tversky and the Ascent of Behavioral Economics*, 16 J. RISK & UNCERTAINTY 7 (1998) (surveying the literature on behavioral economics).

261. A broad spectrum of people under documented conditions, in particular contexts, make decisions that appear anomalous from a utility maximizing standpoint and may violate their own expressed preferences for decision making. *See* Robyn M. Dawes, *Behavioral Decision Making and Judgment*, in 1 HANDBOOK OF SOC. PSYCHOL. 498 (Daniel T. Gilbert et al., eds., 4th ed. 1998) (noting that these anomalies in rationality are systemic rather than ad hoc and are highly replicable in experimental settings). Far from being a pessimistic assessment of human rationality, however, these studies indicate contexts in which decision makers may need a structured process to make optimal decisions. *See, e.g., id.* at 500 (reporting studies showing that when anomalies in reasoning are “made transparent” to decisionmakers, their judgment improves); Bazerman at 8-10 (asserting that individual and group decision making can be improved by improved awareness of error-prone heuristics and by providing explicit strategies to counter them).

262. *See* Gerd Gigerenzer, *From Tools to Theories: A Heuristic of Discovery in Cognitive Psychology*, 98 PSYCHOL. REV. 254, 267 (1991) (frequency of anomalous reasoning can be decreased by making the probabilistic nature and questions explicit).

it willing to engage in novel ventures (such as the formation of the special purpose entities that ultimately destroyed the company) and left it with an inflated notion of its ability to control the risks its actions were creating.²⁶³ Second, once embarked on the risky ventures, cognitive conservatism and the phenomenon of cognitive dissonance created a commitment bias that entrenched organizational commitment to the solution of special purpose entities and precluded remedial action.²⁶⁴ Third, a strong bias in human decisionmaking to simplify (hence the need for heuristics and biases in the first place) is especially true of group decisionmaking, and when presented with complex financial transactions, directors have a tendency to think they are simpler and less controversial than warranted.²⁶⁵ Although these cognitive quirks once may have provided an evolutionary advantage, they now impede wise corporate judgment, and any regulation ought to attempt to counteract these tendencies.

Congress's solution to the corporate debacles illustrated by Enron was the passage of the Sarbanes-Oxley Act. The Sarbanes-Oxley Act's principal remedy for director abdication of monitoring duties was to place the audit committee in charge of monitoring the financial controls of the corporation.²⁶⁶ Because the legislation does not account for the way people interact in reaching their decisions, it is unlikely to prevent future incidents like Enron. Cognitive psychology and evolutionary game theory help explain why.

A. Corporate Compliance Programs: The Congressional Solution and Its Problems

Under the Sarbanes-Oxley Act, the board's audit committee must oversee corporate financial disclosures.²⁶⁷ Although not all reporting companies are required to have an audit committee, if a firm wishes to be listed on a national exchange, it must have one.²⁶⁸ The firm must also disclose whether the audit committee has a financial expert, and if not, explain why.²⁶⁹ Under the new legislation, the audit committee not only has sole authority to appoint, compensate and oversee the firm's auditors, it must also oversee the firm's

263. Beecher-Monas, *supra* note 259, at 381-86.

264. *Id.* at 386-87.

265. *Id.* at 376.

266. See Sarbanes-Oxley Act § 301 (establishing the audit committee requirement for publicly listed companies); § 302 (requiring the signing officers to disclose deficiencies in internal controls to the audit committee).

267. Sarbanes-Oxley Act §§ 301, 302.

268. Section 301(1)(A) of the Sarbanes-Oxley Act requires the SEC to "direct the national securities exchanges and national securities associations to prohibit the listing of any security of an issuer that is not in compliance" with the audit committee requirements.

269. Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, § 407, 116 Stat. 745, 790 (2002). To qualify as a financial expert "the Commission shall consider whether a person has, through education and experience as a public accountant or auditor or a principal financial officer, comptroller, or principal accounting officer of an issuer" sufficient experience. § 407(b).

compliance program.²⁷⁰ Moreover, section 302 of the Sarbanes-Oxley Act requires only that the principal executive and financial officers certify that they have disclosed deficiencies to the issuer's audit committee or persons fulfilling the equivalent function. Although the initial responsibility for setting up the program (and certifying that they have done so) rests on the corporation's CEO and CFO, they must report all "significant deficiencies" to the audit committee.²⁷¹ This effectively makes the audit committee the bearer of ultimate responsibility.

The idea of audit committee monitoring as a solution to financial reporting failures did not originate with Sarbanes-Oxley. The New York Stock Exchange and NASDAQ both required listed firms to have audit committees composed mostly or exclusively of independent directors since at least 1999.²⁷² Proxy statement disclosure about the audit committee's independence and discussions between the audit committee and management about audited financial statements have also been required since 1999.²⁷³ However, neither the listing requirements nor the proxy statement disclosure rules were based on any empirical studies about audit committee effectiveness. Indeed, a number of studies found that the presence of an audit committee does not affect the likelihood of accounting fraud.²⁷⁴

Sarbanes-Oxley requires that the audit be composed of independent directors.²⁷⁵ Independence is defined as meaning that the director may not accept consulting, advisory, or other fees or be an affiliated person of the issuer or its subsidiaries.²⁷⁶ The Sarbanes-Oxley Act defines independence to more closely comport with an absence of conflict. The definition, therefore, may be a helpful clarification. However, the use of independent directors as a solution to the monitoring problem is no more empirically based than the audit committee solution. Most large firms already have a majority of independent directors, and

270. The audit committee must establish procedures for "the receipt, retention, and treatment of complaints received by the issuer regarding accounting, internal accounting controls, or auditing matters." Sarbanes-Oxley Act § 301(4)(A). In addition, the audit committee must resolve any disagreements between the auditor and management. § 301(2). Finally, because the CEO and CFO must report to the audit committee any deficiencies, fraud, or significant changes in the internal control system, under section 302, the audit committee appears to bear the ultimate responsibility for its oversight.

271. See Sarbanes-Oxley Act § 302 (requiring certification of the adequacy of the program).

272. See NYSE Listed Company Manual § 303.01(B)(2)(a); 17 C.F.R. §§ 229.306(a), 240.14a-101 (2001) (requiring listed firms to provide shareholders with an annual Audit Committee Report).

273. See SEC Release No. 34-42266 (Dec. 22, 1999).

274. Mark S. Beasley, *An Empirical Analysis of the Relation Between the Board of Director Composition and Financial Statement Fraud*, 71 ACCT. REV. 443 (Oct. 1996).

275. Not only must listed companies have an audit committee, but the Sarbanes-Oxley Act requires that if there is an audit committee, its members must be independent directors. Sarbanes-Oxley Act, Pub. L. No. 107-204, §301(3)(a), 116 Stat. 745, 775-77 (2002).

276. *Id.* § 301(3)(B)(1),(11).

audit committees were already expected to be independent.²⁷⁷ Indeed, Enron appears to have had a model board since only two of its fourteen members were insiders.²⁷⁸

Like the audit committee solution to monitoring problems, the virtues of independent boards are debatable. Although the Business Roundtable recommended that a substantial majority of the directors be independent,²⁷⁹ as did the National Association of Corporate Directors,²⁸⁰ at least one study finds that the presence of inside directors on the board significantly increases the probability of accounting fraud,²⁸¹ even where the majority is composed of outside directors, insider presence on most boards remains a strong influence.²⁸² In addition, a number of studies show that firms with a majority of independent directors do not perform any better than firms without such boards, and that firms with only one or two inside directors may actually perform worse.²⁸³

Most of the audit committee's information will still come—directly or indirectly—through the CEO and CFO. Because the independent board members—if not the audit committee—will normally set the CEO's pay, and the CEO therefore has an incentive to paint a positive picture, there is reason to believe that the information reaching the audit committee may be skewed.²⁸⁴ The audited financial reports ought to provide a check on this kind of misinformation,

277. See Sanjai Bhagat & Bernard Black, *The Uncertain Relationship Between Board Composition and Firm Performance*, 54 BUS. LAW. 921, 921 (1999) (citing a survey of 484 of the S&P 500 firms finding that over half had only one or two inside directors, the median firm and over 80% outside directors, and only nine firms had a majority of inside directors).

278. See Jeffrey N. Gordon, *What Enron Means for the Management and Control of the Modern Business Corporation: Some Initial Reflections*, 69 U. CHI. L. REV. 1233, 1241 (2002) (noting that the Enron board was “a splendid board on paper, fourteen members, only two insiders [T]he outsiders had relevant business experience . . . [and] owned stock . . . [but] was ineffectual in the most fundamental way”).

279. THE BUS. ROUNDTABLE, STATEMENT ON CORP. GOVERNANCE 10 (1997).

280. Alan L. Dye, Securities Law Compliance Programs, ALI-ABA Course of Study, July 18-20, 2002.

281. Beasley, *supra* note 274, at 456-57 (using regression analysis of seventy-five fraud and seventy-five no-fraud firms to determine that no-fraud firms have a significantly higher proportion of “gray” and outside directors).

282. See Bhagat & Black, *supra* note 277, at 923 (noting that firms with majority inside directors perform equivalently to those with majority outside directors).

283. See *id.*; James P. Walsh & James K. Seward, *On the Efficiency of Internal and External Corporate Control Mechanisms*, 15 ACAD. MGMT. REV. 421, 434 (1990) (citing studies showing that “there does not yet seem to be consensus support (either theoretically or empirically) for the conventional wisdom that either an increased presence of outsiders on the board of directors or the increased ownership stakes of any shareholder group (including management) necessarily improve corporate performance”).

284. See Donald C. Langevoort, *The Human Nature of Corporate Boards: Law, Norms, and the Unintended Consequences of Independence and Accountability*, 89 GEO. L.J. 797, 812 (2001) (noting the “strong last-period temptation to manipulate the information given to the board”).

but there are reasons to doubt their complete objectivity.²⁸⁵

The Sarbanes-Oxley Act's explicit focus on the audit committee as the ultimate firm overseer is new, however. This solution is troubling. Little evidence exists that compliance programs prevent misconduct. The deterrence model of regulation, based on the theory that legal compliance will occur whenever the pleasure and profits of breaking the law are outweighed by the pain of punishment, is problematic when applied to corporate behavior.²⁸⁶ This is partly because of the diffusion of responsibility in corporations, and partly because laws regulating corporate conduct are not capable of defining the precise behavior required of corporate actors.²⁸⁷ As a result, cooperative enforcement techniques, such as the federal sentencing guidelines²⁸⁸ (which permit the existence of an effective compliance program to reduce the severity of sentencing), and the Sarbanes-Oxley Act's requirement of internal controls monitored by the audit committee, have become a favored method of enforcement. The idea is that the corporation is in the best position to institute preventive and detection measures.²⁸⁹ The goal is to provide incentives for optimal corporate behavior. An anticipated benefit is the reduction of public monitoring costs.

The idea underlying such regulation is a model of business regulation that

285. MAX H. BAZERMAN, *JUDGMENT IN MANAGERIAL DECISION MAKING* 2 (3d ed. 1994) (discussing the Phar-Mor audit to explain why auditors have a pervasive and intractable conflict).

286. See Michael A. Perino, *Enron's Legislative Aftermath: Some Reflections on the Deterrence Aspects of the Sarbanes-Oxley Act*, 76 *ST. JOHN'S L. REV.* 671, 674-76 (discussing the economic theory of deterrence); John T. Scholz, 60 *LAW & CONTEMP. PROBS.* 253, 258 (1997) (stating that the "simple deterrence model is most appropriate when legal statutes unambiguously define corporate misbehavior" but noting that "rules are seldom capable of defining the exact behavior desired of corporations").

287. Scholz, *supra* note 100, at 258 (observing that while "the simple deterrence model is most appropriate when the legal statutes unambiguously define corporate misbehavior" such rules are rare).

288. *UNITED STATES SENTENCING GUIDELINES* § 8C2.5(f) (reducing base fines in the presence of an effective compliance program).

289. See Jennifer Arlen & Reinier Kraakman, *Controlling Corporate Misconduct: An Analysis of Corporate Liability Regimes*, 72 *N.Y.U. L. REV.* 687, 693 (1997) (noting that "entity liability can lead companies to institute 'preventive measures' that deter by making misconduct more difficult or expensive for wrongdoers, or by reducing the illicit benefits of unpunished (or successful) misconduct, without affecting the probability that it is detected by enforcement officials"). In discussing the financial disclosure regime, the agents at issue are the managers, such as those at Enron who advocated the use of special purpose entities to keep debt off the books, the directors who waived conflict of interest proscriptions in the Enron compliance code, and both managers and directors who failed to disclose these shenanigans. The problem with entity liability for nondisclosure, however, is that it effectively permits the shareholders to be hit twice: once by the managers and directors who failed to disclose, and once by the imposition of liability on the corporation, a liability they must ultimately pay. Moreover, in an Enron-type situation, where the corporation itself is bankrupt, no entity remains for liability.

Ayres and Braithwaite call an “enforcement pyramid” strategy.²⁹⁰ In this strategy, regulators predominantly rely on self-regulation (the base of the pyramid) but may become increasingly punitive in the face of noncompliance, with the ultimate threat of a “big gun” at the top of the pyramid for those firms that persist in noncompliance.²⁹¹ This model is based on the tit-for-tat strategy of evolutionary game theory.²⁹² It increasingly characterizes enforcement practice.²⁹³

Even if there were evidence that compliance programs were effective in deterring misconduct, there remains the question of why the audit committee should be singled out as the responsible actor. If the justification is that these independent financial experts are the only ones in the firm that can understand the complex corporate financing decisions faced by today’s firms, that justification has little merit. Financial complexity impairs the ability of everyone, including management, to determine value.²⁹⁴ Complexity should alert directors to a problem. If the directors do not understand what is going on, neither the investors (or analysts) are unlikely to have any deeper insight, and disclosure is not going to perform its function of revealing the value of the firm.

Corporate compliance programs (“internal controls”) are supposed to solve the problem of ensuring that those at the top of the bureaucracy are informed regarding what is going on “down in the trenches.” Like the audit committee and independent director solutions, the internal controls solution has been around for

290. See AYRES & BRAITHWAITE, *supra* note 100, at 39 (describing the enforcement pyramid).

291. *Id.* at 48-49 (stating that “regulators should not do without an image of invincibility in the background, and should be reluctant to push punishment to the foreground of day-to-day regulatory encounters”).

292. See Sidney A. Shapiro & Randy S. Rabinowitz, *Punishment versus Cooperation in Regulatory Enforcement: A Case Study of OSHA*, 49 ADMIN. L. REV. 713, 727 (1997) (explaining how a tit-for-tat strategy combined with a range of sanctions, as with an enforcement pyramid, “can increase the potential of this strategy”).

293. See Darryl K. Brown, *Street Crime, Corporate Crime, and the Contingency of Criminal Liability*, 149 U. PA. L. REV. 1295, 1312 (2001) (explaining that the model of an enforcement pyramid is “now widely accepted in regulatory debate and increasingly characterize[s] enforcement practice”).

294. See Douglas G. Baird & Robert K. Rasmussen, *Four (or Five) Easy Lessons From Enron*, 55 VAND. L. REV. 1787, 1802 (2002) (explaining that “Enron’s basic business plan—combining contracting over commodities with supplying the physical asset itself—created a large network of interrelated entities” which, although they had tax and accounting advantages, made it “difficult for those in charge to assess exactly how any given Enron division was performing”). As the authors note:

One of the worst things a decisionmaker can do is pollute her own sources of information. The sheer complexity of understanding what Enron did and did not own undermined the business model premised upon the idea that a firm that combines the trading function with the delivery function enjoys a comparative advantage.

Id. at 1802-03.

a while.²⁹⁵ Since the passage of the Foreign Corrupt Practices Act in 1978, the SEC has required registered or reporting companies to have a system of internal financial controls, and has imposed liability for failing to adequately maintain financial controls.²⁹⁶ In the 1980s, the securities industry began creating internal compliance programs and routinely began to engage outside counsel for internal investigations.²⁹⁷ In addition, recognizing the centrality of the problem of information and accountability to modern business, the Federal Sentencing Guidelines permit a reduction in criminal sentence for guilty corporations that have in place an effective corporate compliance program to monitor and assure the flow of information and prescribe steps to be taken in the event of a misstep.²⁹⁸ Thus, the duty of care imposed by the guidelines requires firm managers to maintain adequate oversight of the firm's operations and to obtain adequate and reliable information before making decisions and taking action.²⁹⁹

Although such programs are already widespread,³⁰⁰ the effectiveness of corporate compliance programs has been hotly debated. Since 1997, for example, despite the widespread adoption of compliance programs, there has been a significant growth in financial restatements to correct material

295. For a brief history of such legislative attempts to stimulate corporate self-policing, see Note, *The Good, the Bad, and Their Corporate Codes of Ethics: Enron, Sarbanes-Oxley, and the Problems with Legislating Good Behavior*, 116 HARV. L. REV. 2123, 2124 (2003).

296. See *SEC v. World-Wide Coin Invs., Ltd.*, 567 F. Supp. 724, 749-50 (N.D. Ga. 1983) (discussing Securities Exchange Act § 13); see also COX ET AL., *supra* note 175, at 705 (discussing the legislative history of § 13(b)(2) and explaining that although a firm's materially misleading financial statements were actionable even before the Foreign Corrupt Practices Act, their passage clarified situations "where . . . the law governing the primary disclosure duty is quite fuzzy," such as where the deficiency is quantitatively immaterial but raises questions about "character, competence or integrity of management"). Courts have not permitted private causes of action to proceed under the accounting controls provisions. See, e.g., *Lewis v. Sporck*, 612 F. Supp. 1316, 1332 (N.D. Cal. 1985).

297. Donald B. Ayer & James J. Graham, *Corporate Disclosure Programs: Voluntary and Mandatory*, 1 BUS. CRIMES BULL.: COMPLIANCE & LITIG. 4 (May 1994).

298. The Federal Sentencing Guidelines for Organizations reduce fines for violations that have taken place despite the presence of an effective compliance program. U.S.S.G. § 8C2.5(f), 8C2.6. This is based on the theory that organizational due diligence is a proxy for intent. I do not disagree with that theory. Rather, I disagree with the notion of a corporate partnership in crime control.

299. U.S.S.G. § 8A1.2, comment 3(k)(2); *In re W.R. Grace & Co. Report*, SEC Rel. No. 34-39157 (Sept. 30, 1997) (concluding that officers and directors of W.R. Grace & Co. failed to fulfill their obligations under the securities laws by failing to inquire into the reasons for nondisclosure in periodic reports of material information of which they were aware). At least one state law decision has weighed in (at least in dicta) opining that failure to have such a program would be a breach of state law fiduciary duty. *In re Caremark Int'l Inc. Derivative Litig.*, 698 A.2d 959 (Del. Ch. 1996).

300. See Stephen Calkins, *Corporate Compliance and the Antitrust Agencies' Bi-Modal Penalties*, 60 LAW & CONTEMP. PROBS. 127, 147 n.84 (1997) (citing a survey showing that 75 to 95% of U.S. firms have written codes of conduct).

misrepresentations of financial results, primarily due to revenue recognition issues.³⁰¹ While many commentators extol the ability of compliance programs to ensure the flow of information within the firm,³⁰² there are a number of valid criticisms of such programs. One criticism is that the only effect of such programs has been to shift the locus of liability further down the corporate hierarchy.³⁰³ People who run the company will attempt to minimize their own risks. As a consequence, the senior personnel have incentives to report fraud only if there is little chance that they will be implicated.³⁰⁴

Because these programs create many cosmetic rather than real changes, legislators have attempted to give them some force.³⁰⁵ An effective compliance

301. United States General Accounting Office, Report on Financial Statement Restatements (Oct. 2002), at 14-15 (noting that while the number of listed companies decreased by 20% from 1997-2002, the number of listed companies restating their financials increased by 165% to a projected 3% of listed companies by the end of 2002). Over this period the average (median) market capitalization of a restating company grew from \$500 million (\$143 million) in 1997 to \$2 billion (\$353 million) in 2002. *Id.* at 17. The GAO database excluded announcements of restatements for reasons other than material misstatements of financial results. *Id.* at 21. For example, the WorldCom restatements involved overstating net income by recording operating expenses as capital expenditures. See WorldCom Press Release, WorldCom Announces Intention to Restate 2001 and First Quarter 2002 Financial Statements (June 25, 2002).

302. See, e.g., Ribstein, *supra* note 2, at 15 (opining that “[e]stablishment of control systems within the firm and protecting whistleblowers helps ensure the flow of information within the company”); Lynn L. Dallas, *A Preliminary Inquiry into the Responsibility of Corporations and Their Directors for Corporate Climate: The Psychology of Enron’s Demise*, ST. JOHN’S L. REV. (forthcoming) (proposing increased implementation of ethical compliance programs); Diana E. Murphy, *The Federal Sentencing Guidelines for Organizations: A Decade of Promoting Compliance and Ethics*, 87 IOWA L. REV. 697 (2002) (discussing the positive effects of the corporate compliance programs induced by the Federal Sentencing Guidelines); H. Lowell Brown, *The Corporate Director’s Compliance Oversight Responsibility in the Post-Caremark Era*, 26 DEL. J. CORP. L. 1 (2001) (advocating increased use of internal control systems); Pamela H. Bucy, *Corporate Ethos: A Standard for Imposing Corporate Criminal Liability*, 75 MINN. L. REV. 1095, 1099 (1991) (published shortly before the organizational guidelines became effective; advocating the implementation of compliance programs).

303. See William S. Laufer, *Corporate Prosecution, Cooperation, and the Trading of Favors*, 87 IOWA L. REV. 643, 648-49 (2002) (discussing the trend toward “reverse whistleblowing” in corporations as a result of the Organizational Sentencing Guidelines’ incentives structure); William S. Laufer, *Corporate Liability, Risk Shifting, and the Paradox of Compliance*, 52 VAND. L. REV. 1343, 1350 (1999) (opining that firms “have been extraordinarily successful in shifting both the locus of liability risk and the enforcement function down the corporate hierarchy”).

304. See James J. Graham & Morris Silverstein, *Voluntary Disclosure Bandwagon: Pitfalls for Federal Agencies*, 2 BUS. CRIMES BULL.: COMPLIANCE & LITIG. 2, 2 (1995) (observing that in the defense industry, although voluntary disclosure programs resulted in increased reporting of minor accounting discrepancies, few of the more serious crimes involving high level personnel were uncovered).

305. See, e.g. Note, *supra* note 295, at 2127 (noting critics who assert that compliance codes

program risks generating incriminating information, making truly effective programs unduly expensive to the corporation's management and thereby decreasing incentives to engage in meaningful self-evaluation.³⁰⁶ Another critique of the purported partnership in fighting crime is that the pervasiveness of agency costs makes optimal compliance unlikely.³⁰⁷ Moreover, the risks associated with internal investigations—the backbone of any accountability program—may create incentives for half-hearted compliance. There is a risk that the information generated by an internal investigation may identify a problem that will force affirmative action to avoid liability; this risk is a deterrent to serious investigatory efforts.³⁰⁸ Also present is the threat that the investigation may uncover discoverable documents that could be used against the firm and its managers in private civil litigation.³⁰⁹ Further, a firm that does not properly implement and enforce a rigorous compliance program may be in worse shape—by exposing itself to grater liability—than a firm with a less rigorous code.³¹⁰

Compliance programs are not cheap. They are costly to set up and run, and the people employed in the compliance office will have their own rent-seeking agendas.³¹¹ Not only is disclosure involving highly placed personnel rare, but supervisory personnel are in the best position to frame any disclosure and thus shape the facts. They are also expensive in the sense that it is difficult to tell how effectively the monitoring is being done.³¹² The theoretical justification for

“comprise little more than platitudes” and asserting “the need for corporate codes with teeth”). Both codes of ethics and internal controls programs are part of corporate compliance, so although the Note addresses § 406 (the code of ethics requirement) rather than the § 404 internal controls requirement, the concerns are similar for both. *Id.* at 2138 (noting the problem).

306. See Jay P. Kesan, *Encouraging Firms to Police Themselves: Strategic Prescriptions to Promote Corporate Self-Auditing*, 2000 U. ILL. L. REV. 155 (discussing the perils of self-evaluation with respect to environmental laws).

307. See Donald C. Langevoort, *Monitoring: The Behavioral Economics of Corporate Compliance with Law*, 2002 COLUM. BUS. L. REV. 71, 111 (2002). This concern for conflicting interests is addressed in two major changes wrought by the Sarbanes-Oxley Act, one prohibiting auditors from providing contemporaneous consulting services to the firms they audit (§ 204(a)), and one prohibiting firms from extending personal loans (or arranging them) to officers and directors (§ 402(a)).

308. Michael P. Kenny & William R. Mitchelson, Jr., *Corporate Benefits of Properly Conducted Internal Investigations*, 11 GA. ST. U. L. REV. 657, 661 (1995).

309. *Id.*

310. See, e.g., Harvey L. Pitt & Karl A. Groskaufmanis, *Minimizing Corporate Civil and Criminal Liability: A Second Look at Corporate Codes of Conduct*, 78 GEO. L.J. 1559, 1560 n.8 (1990) (noting the dangers of implementation).

311. See Langevoort, *supra* note 284, at 100 (noting that “[a]ll economic units within an organization tend to construe ambiguous information in a self-serving way that maximizes its influence and, hence, claim to additional resources”).

312. Arlen and Kraakman argue that the optimal level of deterrence can be provided by a mixture of high penalties and a self-policing duty, although they acknowledge the difficulties of

imposing the costs of internal investigations is that the organization is in the best position to detect and deter aberrant behavior. These costs, however, are not imposed upon the people who can detect and deter misconduct, but on the shareholders, who have little power to affect management decisions.³¹³

B. *The Risky Shift and Strategic Interactions*

Corporate compliance programs, like the system of internal financial controls mandated by Sarbanes-Oxley, although praised as a partnership in crime control and meant to align the interests of business with the public interest,³¹⁴ are ineffective in deterring corporate misconduct, because they are not based on the decisionmaking processes of interacting groups.³¹⁵ The context where monitoring counts is where the firm is experiencing conditions of relative loss. Although classical economists claimed that people are naturally risk averse, this is not necessarily so. Instead, people appear to avoid risky actions only when they are experiencing relative wealth.³¹⁶ They favor risky actions when they are in a losing situation.³¹⁷ For example, when all options are undesirable, high risk gambles are often preferred to fairly certain losses.³¹⁸ Daniel Kahnemann and Amos Tversky proposed a formal model that they called prospect theory, in which people are both risk-seeking and risk-averse: risk-averse for moderate probabilities and risk-seeking for small probabilities of gain; the opposite for probabilities of loss.³¹⁹ When this kind of relative loss occurs, cover-ups are

proving optimal self-policing. See Arlen & Kraakman, *supra* note 289, at 716 (noting that “a duty-based regime can solve the credibility problem only if the court can determine whether the firm has implemented efficient enforcement measures”).

313. See, e.g., Jonathan R. Macey, *Agency Theory and the Criminal Liability of Organizations*, 71 B.U. L. REV. 315, 327 (1991) (observing that under conditions of near-bankruptcy, there are strong managerial incentives for misconduct in order to save their jobs, and that when there has been a period of lax enforcement, corporate culture may permit adoption of profitable but illegal practices).

314. See JAY A. SIGLER & JOSEPH E. MURPHY, *INTERACTIVE CORPORATE COMPLIANCE: AN ALTERNATIVE TO REGULATORY COMPULSION* (1988) (describing the growth of the idea of government-business cooperation).

315. Beecher-Monas, *supra* note 259, at 357 (describing cognitive biases undercutting the effectiveness of compliance programs).

316. See Amos Tversky & D. Kahnemann, *Rational Choice and the Framing of Decisions*, 59 J. BUS. 251-94 (1986) (studies showing that people treat risks concerning perceived gains differently from risks concerning perceived losses).

317. See T. S. Bateman & C.T. Zeithaml, *The Psychological Context of Strategic Decisions: A Model and Convergent Findings*, 10 J. STRATEGIC MGMT. 59-74 (1989).

318. See Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263-90 (1979).

319. See generally *id.* at 263-91. Since its original proposal, prospect theory has been tested extensively. See, e.g., George Wu et al., *Decision Under Risk*, in BLACKWELL HANDBOOK OF JUDGMENT AND DECISION MAKING (Nigel Harvey & Derek Koehler, eds. forthcoming) (reviewing

predictable.³²⁰

Enron began to experience intense financial pressures immediately before the board approved the risky—and conflicted—structured financing transactions that ultimately led to the firm’s demise. Although Enron appeared highly profitable between 1995-2000, when its revenue grew at a compound annual rate of more than 60%, its investments in energy and water plants and fiber optic networks were sizeable and did not produce the anticipated income stream.³²¹ After 1997, Enron’s cost of capital consistently exceeded its return on invested capital, and its annual return on invested capital decreased from October 1995 until Enron finally declared bankruptcy in December 2001.³²² The transformation of Enron’s old-fashioned energy business—oil and gas pipelines, power plants, etc.—into an online energy trading business, similar to a derivatives trading company, made

the literature and discussing the original prospect theory and its later refinements, evaluating their strengths and weaknesses).

320. This risky shift presents the familiar “last period problem,” in which, as Arlen and Kraakman discovered, most open market securities frauds are prompted by the self-interested fears of management that adverse financial results—periods of relative loss—will cause them to lose their jobs. See Arlen & Kraakman, *supra* note 289, at 724-30 (demonstrating that most securities frauds occur when firms face the threat of insolvency, and arguing that it is rational for managers to postpone or avoid disaster by taking escalating risks that culminate in corporate cover-ups, including securities fraud). Management takes risks to buy time during which a corporate turn around may be possible, or to hang on as long as they can. See Donald C. Langevoort, *Capping Damages for Open-Market Securities Fraud*, 38 ARIZ. L. REV. 639, 655 (1996) (discussing the findings of both Jennifer Arlen and William Carney). When businesses experience financial reverses, agency incentives tend to reinforce the risk preference bias predicted by prospect theory. See Richard W. Painter, *Lawyers’ Rules, Auditors’ Rules, and the Psychology of Concealment*, 84 MINN. L. REV. 1399, 1419 (2000); Dan J. Laughmunn et al., *Risk Preferences for Below Target Returns*, 26 J. MGMT. SCI. 1238 (1980) (documenting managerial risk seeking under conditions of relative loss). Thus, corporate cover-ups are predictable if the corporation faces bankruptcy. See Arlen & Kraakman, *supra* note 289, at 724-27 (discussing the predictability of corporate nondisclosure in periods where the corporation faces insolvency). Corporate governance innovations devoted to reduce managerial risk aversion and encourage a more entrepreneurial risk-taking perspective (such as compensation that rewards short-term stock price gains) may actually exacerbate a firm’s downward spiral. See, e.g., Leo E. Strine, Jr., *Derivative Impact? Some Early Reflections on the Corporation Law Implications of the Enron Debacle*, 57 BUS. LAW. 1371, 1374 (2002). The author noted that over

the last two decades, much thought has been devoted to finding ways to direct the attention of boards and directors away from a safe managerialist perspective focusing on entity preservation, and toward a more entrepreneurial, risk-taking, and competitive-enhancing attitude . . . [such as] the implementation of compensation policies for managers and directors that reward short-term stock price gains.

321. See Stuart L. Gillan & John D. Martin, Working Paper Series, *Financial Engineering, Corporate Governance, and the Collapse of Enron*, U. Del. Center for Corporate Governance 2002, at 7 (2002), <http://www.be.udel.edu/ccg/research.htm> (last visited Oct. 22, 2003).

322. *Id.* at 37.

significant cash flow imperative.³²³ Because it needed significant amounts of daily cash to settle its contracts, Enron depended upon large lines of credit, the availability of which were based on Enron's credit ratings.³²⁴ Credit ratings in turn are based on a firm's financial statements. Therefore, to obtain investment-grade credit ratings, Enron had to increase cash flow, lower debt, and prevent large earnings fluctuations.³²⁵ This loss-framing may have influenced the subsequent events. In order to accomplish these goals, the company decided on a strategy of shedding (or increasing immediate returns on) company assets like power plants that had low returns and persistent debt.³²⁶ Because Enron was not able to find any buyers for these assets, these financial pressures created an intensifying debt burden.³²⁷ This is precisely the kind of relative loss that predicts risky behavior.

These pressures, framed in terms of relative losses, created a context for taking risks that placed the firm in great danger and ultimately caused its demise. Enron reported more gain on its operations than it made.³²⁸ Because it could not find buyers for its assets, it sold them to "unconsolidated affiliates."³²⁹ It engaged in many transactions that gained it nothing other than an ability to hide its finances.³³⁰ It exposed itself to contingent liabilities through its special purpose entities.³³¹ It also permitted these off-balance sheet special purpose entities to be run by Enron officers, a conflict prohibited by Enron's compliance program. These decisions were made by (or under the direction of) Enron's directors, who operated under a state-of-the-art corporate governance structure. In hindsight, those were terrible decisions. The important question now, however, is whether Sarbanes-Oxley can prevent future debacles. Optimism and the illusion of control tend to increase risk taking.³³² This is not a bad thing under normal conditions, when managers and directors tend to be risk averse and

323. See Enron Report, *supra* note 58, at 7 (noting that Enron's online energy trading business bought and sold contracts to deliver natural gas, oil or electricity, treating them like commodity futures—but outside the regulatory purview of the securities or commodities laws).

324. *Id.*

325. *Id.*

326. As the presentation made to the Finance Committee explains, "[l]imited cash flow to service additional debt," combined with "[l]imited earnings to cover dilution of additional equity" meant that "Enron must syndicate . . . in order to grow." *Id.* (quoting Finance Committee Presentation (Oct. 2000)).

327. *Id.*

328. Baird & Rasmussen, *supra* note 294, at 1801.

329. See Enron Report, *supra* note 58, at 7-8 (noting the Enron board's "intense focus on its credit rating, cash flow, and debt burden").

330. See Baird & Rasmussen, *supra* 294, at 1804 (citing the example of the Raptor III transaction, for which it paid LJM2 \$39.5 million without gaining anything "other than an ability to hide its finances from investors for losses over the short term").

331. Gillan & Martin, *supra* note 321, at 9.

332. Daniel Kahnemann & Dan Lovello, *Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking*, 39 MGMT. SCI. 17, 28 (1993).

loss averse.³³³ But when the company is experiencing financial reversals—under conditions of loss—where they are apt to be risk preferring, it could spell disaster. For example, Enron's management apparently persuaded itself—despite massive evidence to the contrary—that what worked in the context of deregulating energy markets in the United States could work in other markets globally.³³⁴ As a result of this overconfidence, their financial models appear to have been hopelessly inaccurate.

C. *The Role of the Board of Directors*

In many ways, the Enron board appears to have met or exceeded the standards set by Sarbanes-Oxley, at least in form. For example, Enron's board had both an audit committee and a finance committee.³³⁵ The audit committee advised the board on hiring the firm's independent auditor, ensured that the auditor was accountable, reviewed the auditor's compensation, reviewed the firm's annual financial statements, reviewed the financial statements included in the Annual Report to Shareholders, footnotes and management commentaries, and Form 10-K filings, approved major changes and other choices regarding the appropriate accounting principles and practices to be followed in preparing the financial statements, assessed the firm's internal financial control systems, approved for recommendation to the board the corporate compliance policies and procedures, and filed a report in the annual proxy statement.³³⁶ The finance committee was responsible, among other things, for monitoring management financial policy, plans and proposals, changes in risk management policy and the transaction approval process.³³⁷

Despite having what appeared to be an ideal corporate governance structure, Enron's board and subcommittees made a number of decisions that accelerated its shift toward risky alternatives.³³⁸ First, in February 1999, the audit committee made the decision to reappoint as auditor Arthur Anderson, a questionable decision in light of the conflict between Anderson's role as a financial consultant and its role as auditor of the same transactions it had recommended.

333. As Kahneman & Lovallo note, "Bold forecasts and timid attitudes to risk tend to have opposite effects." *Id.* at 30. Countering risk aversion may be one of the reasons for prizing managerial optimism. However, under conditions of risk preference, overconfidence could lead to very bad judgment. *See id.* (noting that "[i]ncreasing risk taking could easily go too far in the presence of optimistic forecasts").

334. *See* Baird & Rasmussen, *supra* note 294, at 1797.

335. ENRON CORP., AUDIT AND COMPLIANCE COMMITTEE CHARTER (as amended Feb. 12, 2001), *in* ENRON CORP. PROXY STATEMENT PURSUANT TO SECTION 14(A) OF THE SECURITIES AND EXCHANGE ACT OF 1934, at 44-47 (2001). It also had compliance, compensation and management development, executive, nominating, and corporate governance committees. *Id.*

336. *Id.*

337. *Id.*

338. Enron Report, *supra* note 58, at 12 (observing that "more than a dozen incidents over 3 years . . . should have raised Board concerns").

In addition, Anderson had acknowledged that Enron's accounting practices (practices Anderson had consulted on) were highly risky.³³⁹ This decision was revisited, with similar results, once or twice a year thereafter.³⁴⁰ A second series of decisions entailed the waiver of conflicts of interest provisions in Enron's code. At a special meeting of the board in June 1999 (held by teleconference), the entire board approved the formation of a special purpose entity, LJM, to be owned and managed by CFO Fastow, without the prescribed approval of the finance committee.³⁴¹ This decision entailed waiving the conflict of interest provisions to permit CFO Fastow to manage the special purpose entity, but the board failed to put any controls in place to monitor this self-dealing transaction.³⁴²

Twice more in 1999 and 2000 the board approved similar special purpose entities allowing the firm's CFO to set up special purpose entities to improve Enron's financial statements.³⁴³ Not until February 2001 did the board (through the compensation committee) request any information about the extent to which the CFO was personally benefitting from these transactions, and when the information was not forthcoming, the matter was dropped.³⁴⁴ The board continued to approve structured financing transactions until by October 2000 nearly half of its assets were in Enron's "unconsolidated affiliates."³⁴⁵ For many of these entities, the board also approved guaranteeing the off-book entity's debt.³⁴⁶

These facts may be unique to Enron.³⁴⁷ The decisions of Enron's directors, however, illustrate a number of reasons why the Sarbanes-Oxley Act's reliance

339. *Id.* at 17 (citing Audit Committee Minutes).

340. *Id.* (citing Audit Committee presentations 1999-2001).

341. *Id.* at 24.

342. Although the board's ratification of the CEO's waiver of the firm's code of conduct was not required, it was explicitly requested at each of the LJM presentations. *Id.* at 24 (citing board presentations).

343. *Id.* at 12.

344. *Id.* at 32-33 (noting that it was not until a *Wall Street Journal* article appeared on October 19, 2001 that the board decided to place Fastow on leave) (citing *Enron CFO's Partnership Had Millions in Profit*, WALL ST. J., Oct. 19, 2001).

345. *Id.* at 8 (citing October 2000 presentation to the finance committee).

346. *Id.* at 12 (citing the example of Whitewing, where the board approved moving an affiliated company off Enron's books while guaranteeing its debt with Enron stock, and noting that "Committee and Board presentations throughout 1999, 2000, and 2001 chronicled the company's foray into more and more off-the-books activity.").

347. As Professor Coffee notes, "the problem with viewing Enron as an indication of any systematic governance failure is that its core facts are maddeningly unique." Coffee, *supra* note 2, at 1403 (opining that "the passive performance of Enron's board of directors cannot fairly be extrapolated and applied as an assessment of all boards generally"). Although the particular decisions the Enron board made were unique and the product of the innovative circumstances of Enron, the decisions illustrate group dynamics under conditions of loss that are common to all large publicly held corporations.

on corporate compliance programs to achieve accountability is misconceived. First, a large percentage of directors of publicly held corporations are CEO's of their own firms.³⁴⁸ Directors who manage their own firms and who have themselves been advocating structured financing as a way of improving financial appearances³⁴⁹ may be inclined to see them as legitimate when asked to approve them as directors. CEO's who are reluctant to disclose facets of the internal workings of their own firms may be predisposed to tolerate iffy disclosure as directors. People who, as CEO's, have urged the appointment of auditors who consulted on the structured financing they were to audit may be less inclined to object when they are asked, as directors, to approve such appointments.³⁵⁰

In addition, the audit committee—a group of financial experts—may be more prone to overconfidence than the board as a whole,³⁵¹ making their placement as monitors-in-chief counterproductive. Moreover, confidence tends to be highest when people believe that there is consensus for their opinion and that a decision must be made quickly.³⁵² This is all too often the context of board decisions.

The unconscious heuristics and biases discussed above explain only part of the decisionmaking process. Strategic interactions also come into play. Reciprocity pays, especially in repeat interactions (such as those in the management/director game) within a small group, where people can keep track of previous behavior.³⁵³ Although outside directors have their own corporate

348. See Ronald J. Gilson & Reinier Kraakman, *Reinventing the Outside Director: An Agenda for Institutional Investors*, 43 STAN. L. REV. 863, 874-75 (1991) (noting that “63 percent of outside directors of public companies are chief executive officers of other public companies”).

349. Structured financing is prevalent among large firms, although most do not push the envelope as strenuously as Enron appears to have done. See Schwarcz, *supra* note 75, at 1309 (examining the differences between “the trillions of dollars of supposedly ‘legitimate’ securitization” and that of Enron).

350. See Paul E. Jones & Peter H. Roelofsma, *The Potential for Social Contextual and Group Biases in Team Decision-Making: Biases, Conditions and Psychological Mechanisms*, 43 ERGONOMICS 1129, 1144 (2000) (noting that one explanation of group polarization dynamics is that it “stems from people’s motivation to be perceived, and to present themselves, in a favourable light”).

351. See Mark Seidenfeld, *Cognitive Loafing, Social Conformity, and Judicial Review of Agency Rulemaking*, 87 CORNELL L. REV. 486, 498 (2002) (noting that overconfidence in their predictions is a “bias to which experts may be more prone than novices”); see also Philip E. Tetlock et al., *Assessing Political Group Dynamics: A Test of the Groupthink Model*, 63 J. PERSONALITY & SOC. PSYCHOL. 403, 419 (1992) (testing the empirical basis and theoretical logic of the groupthink model and noting that “groupthink promoted rigid and self-righteous patterns of thinking”).

352. Ruben Orive, *Group Consensus, Action Immediacy, and Opinion Confidence*, 14 PERSONALITY & SOC. PSYCHOL. BULL. 573 (1988) (studies). The conditions of consensus and immediacy appear to have been present in each of the troubling Enron decisions. For example, the Enron board reported nearly unanimous decisions that were typically made within one to two hours. See Enron Report, *supra* note 58, at 8.

353. See VERNON L. SMITH, *BARGAINING AND MARKET BEHAVIOR* 117 (2000) (explaining that

cultures (since they are drawn primarily from executive positions in other firms, academia and government³⁵⁴), they nonetheless interact over time (at least five of the Enron board members, for example, had been with the firm since 1985, and the average in 2000 was eight years of service³⁵⁵).

Thus, their incentives for acting cooperatively toward each other may have outweighed the incentives to act cooperatively toward their investors. When people have to decide between competing courses of action, it is much easier to discount harm to statistical others—the investors, for example—than to people you know.³⁵⁶

In the corporate governance game played by managers and directors, the players' strategies is a repeated prisoners dilemma game, in which the players must decide whether to observe their fiduciary duties or evade them. Management's options are to comply with their fiduciary duties or evade them, while directors' options are to adopt a cooperative or deterrent enforcement strategy. If both cooperate, that is the social optimum because directors will not have to expend resources (time or energy) in monitoring and management can concentrate on meeting business goals rather than worrying about minor infractions. If directors behave cooperatively, however, management has incentives to behave opportunistically and if directors know that management will comply with its fiduciary duties, it may have incentives to nit-pick the details of management proposals rather than concentrating on business goals. The temptations to defect may cause directors to undertake an inefficient amount of scrutiny, while management may forego innovative business opportunities. A tit-for-tat strategy (or its kin, a firm-but-fair strategy) may avoid this inefficient outcome by having directors adopt a more discretionary monitoring strategy during periods where management's temptation to defect is lower (periods of relative gain, for example) or where there is little danger of conflict of interest. Joint cooperation or joint defection are the only plausible equilibria.³⁵⁷

reciprocity, in which "individuals incur short-term costs for their sharing in exchange for delayed benefits for others' sharing," is "possible in close-knit communities because each individual can 'keep score' and punish free-riders with sanctions" but "break down where sociability is pushed to the edge of credibility").

354. Sixty-three percent of outside directors are CEO's of other public companies. Gilson & Kraakman, *supra* note 348, at 874-75. As Gilson & Kraakman observe, "[they] are unlikely to monitor more energetically than they believe they should be monitored by their own boards." *Id.* at 875. Moreover, "personal and psychic ties to the individuals who are responsible for one's appointment" as well as "substantial director compensation" may further act to align directors' interests with management's rather than with the shareholders. Charles M. Elson, *Director Compensation and the Management-Captured Board—the History of a Symptom and a Cure*, 50 SMU L. REV. 127, 161-62 (1996).

355. Enron 2001 Proxy Statement.

356. See George Lowenstein, *Behavioral Decision Theory and Business Ethics: Skewed Trade-Offs Between Self and Other*, in CODES OF CONDUCT 214-15 (David M. Messick & Ann E. Tenbrunsel, eds. 1996) (discussing the trade-offs between options and courses of action).

357. For a discussion of the economics of the game-theoretic model, see Scholz, *supra* note

When the directors' sucker payoff (for management defection) exceeds its punishment payoff, however, capture by management is likely. Rather than leading to joint defection (i.e., stricter director scrutiny of management proposals and increased willingness to vote them down), when this happens, management defection may lead to the management defect: director cooperate equilibrium, a result that is not socially optimal. The social ties that directors frequently have with management, the identification of directors who are CEOs of their own firms with management, and the effort that must be expended in monitoring and uncovering information all make this capture equilibrium more likely.³⁵⁸

Regulators and the regulated community are also repeat players in this sense. Cooperation is likely to evolve in such interactions, but the interactions may become corruption and capture as well as optimal business behavior.³⁵⁹ Agencies (such as the SEC) are much more likely to cooperate than defect, because monitoring and punishment are costly.³⁶⁰ The theory of an enforcement pyramid is that legal compliance is more likely to be effective when a regulatory agency begins by cooperating with the regulated (here a corporation) in a tit-for-tat game, coaxing compliance through self-regulation, with a graduated series of sanctions for infractions, culminating with severe punishment for severe and repeated violations.³⁶¹ The Sarbanes-Oxley model of regulation mandates self-regulation in the form of the internal controls system and audit committee monitoring, and it has increased the severity of sanctions for violations.³⁶² The punishments are still graduated, because penalties will be enforced in conjunction with the Federal Sentencing Guidelines.³⁶³ Thus, the model employed by Sarbanes-Oxley depends on self-regulation and graduated sanctions. What is missing, however, is the third face of Ayres' and Braithwaite's

100, at 188.

358. See, e.g., Charles M. Elson & Christopher J. Gyves, *The Enron Failure and Corporate Governance Reform*, 38 WAKE FOREST L. REV. 855, 857 (observing that "board oversight may be doomed" because "directors who must monitor the managers have been appointed by the very managers they must monitor" and this creates "a great incentive for passivity and acquiescence to management's initiatives and little incentive to actively monitor").

359. See AYRES & BRAITHWAITE, *supra* note 100, at 55 (noting that the "conditions that foster the evolution of cooperation are also the conditions that promote the evolution of capture and indeed corruption").

360. *Id.* at 70 (noting that "firm defection must be of extraordinary proportions to overcome the attitudinal resistance of regulators to punishment" and suggesting tripartism as a solution).

361. *Id.* at 35-40 (outlining the structure of the enforcement pyramid).

362. For example, earnings restatements due to material noncompliance will require the CEO and CFO to reimburse the corporation for any bonus received during the period covered by the restatement under 304; increased criminal penalties for securities violations under 807, 1106; increased criminal penalties for mail and wire fraud under 903 and ERISA under 904; making failure to certify financial reports a crime under 906.

363. Cf. Laufer, *supra* note 303, at 644 (noting that the Federal Sentencing Guidelines constitute "a dynamic enforcement game backed by a 'tall enforcement pyramid'").

enforcement pyramid, the participation of public interest groups.³⁶⁴ Investor litigation might have functioned as public interest groups, enabling the enforcement pyramid.³⁶⁵ These groups have been disabled by PSLRA and *Central Bank*, as well as judicial hostility to securities class actions, however.³⁶⁶

Arguably, increasing the size of the penalty, as Sarbanes-Oxley did,³⁶⁷ might have an effect on deterring corporate misconduct. Under an economic notion of deterrence, either increased enforcement or increased penalties will deter misconduct.³⁶⁸ Empirically, however, increasing the size of the penalties does not appear to have an effect on misconduct.³⁶⁹ On the contrary, increasing the size of the penalty appears to be counter-productive, because it reduces monitoring.³⁷⁰

Sarbanes-Oxley also purports to increase SEC monitoring.³⁷¹ If believed,

364. See AYRES & BRAITHWAITE, *supra* note 100, at 56 (advocating tripartism by permitting public interest groups to “become a fully fledged third player in the game” that “can directly punish the firm” and thus “secure the advantages of the evolution of cooperation while averting the evolution of capture and corruption”).

365. Although Ayres and Braithwaite conceived of the public interest group participation on the front end of the regulatory process, by providing them with full information about the deals cut between regulators and the regulated, they acknowledge that “back-end standing is a prerequisite for front-end submissions to be taken seriously.” *Id.* at 77-78.

366. See *supra* Part II.E.2.b.

367. For example, maximum penalties for mail and wire fraud have been increased from five to twenty years, under Sarbanes-Oxley Act § 903; under § 1106 (amending 15 U.S.C. § 78ff(a)) securities fraud violations under the 1934 Securities Exchange Act have been increased for individuals to fines of \$5 million (from \$1 million) and terms of 20 years (from 10 years) and for organizations fines have been increased to \$25 million from \$2.5 million. These provisions are unlikely to actually change expected penalties, however, because maximum statutory sentences merely set an outside limit for the sentence. See Perino, *supra* note 286, at 686 (observing that the “penalty enhancements are unlikely to deter corporate crime to any greater degree than current provisions”).

368. See, e.g., George Tsebelis, *The Abuse of Probability in Political Analysis: The Robinson Crusoe Fallacy*, 83 AM. POLI. SCI. REV. 77, 79 (explaining and debunking the economic theory that the expected utility of misconduct depends on the size of the penalty).

369. See Scholz, *supra* note 100, at 255 (noting that although the level of compliance increases after penalties are imposed, in OSHA inspections “the size of the penalty has little impact on safety improvements, contradicting the basic premise of deterrence theory that large expected penalties explain compliance”).

370. See George Tsebelis, *Penalty and Crime: Further Theoretical Considerations and Empirical Evidence*, 5 J. THEORETICAL POLITICS 349 (1993) (“[I]ncreases in penalty have no impact on crime, but reduce police monitoring.”).

371. For example, maximum penalties for mail and wire fraud have been increased from five to twenty years under Sarbanes-Oxley § 903; under § 1106 (amending 15 U.S.C. § 78ff(a)), securities fraud violations have been increased for individuals (from \$1 million to \$5 million and from ten years to twenty years) and organizations (from \$2.5 million to \$25 million). These provisions are unlikely to actually change expected penalties, however, because prosecutorial

such statements about increased enforcement will save time, money and effort.³⁷² There are some reasons to be skeptical about the effectiveness of this measure. Even if such statements do result in increased monitoring and misconduct decreases as a result, the result will tend to be cyclical because as soon as misconduct decreases, so will enforcement.³⁷³ Thus, “certainty and severity of penalty are inversely related.”³⁷⁴ It is not the size of the “big gun”³⁷⁵ at the top of the enforcement pyramid that affects the rate of corporate misconduct but the rate of monitoring and enforcement.

IV. A NEW PROPOSAL: MONITORING THROUGH SELF-INSURANCE

Given the foibles of human decisionmaking under conditions of uncertainty, given divergent incentives and interdependence of the players, how can we structure the game to provide optimal social gains? Game theory models the way legal rules can influence strategic actors by altering the information structure of the game, players’ strategies, or their payoffs.³⁷⁶ There is no duty to disclose everything a director knows or learns, or every business risk, but there is a duty to truthfully report (at least periodically) on the financial status of the firm. Monitoring whether the firm is doing so, however, is difficult and leads to the possibility of opportunism.³⁷⁷ Misleading financial disclosures are the leading source of shareholder claims, and they appear to be increasing at the same time as claims related to mergers, acquisitions and divestitures have been more than halved.³⁷⁸

discretion in the number of charges brought has a greater actual effect on penalties. *See* Perino, *supra* note 286, at 686 (observing that the “penalty enhancements are unlikely to deter corporate crime to any greater degree than current provisions”).

372. Tsebelis, *supra* note 370, at 356 (explaining that such announcements must be considered part of the enforcement strategy).

373. *See id.* (describing the “evolutionary model which produces cycles of crime as well as cycles of law enforcement” and explaining that even if the crime rate initially goes down in response to statements about increased enforcement, decreased crime will provoke decreased monitoring, and ultimately the crime rate will rise again).

374. *Id.* at 360.

375. Ayres & Braithwaite explained that the “successful pursuit of cooperative regulation and maximum compliance with the law is predicted by: use of tit-for-tat strategy, access to a hierarchical range of sanctions and a hierarchy of interventionism in regulatory style (the enforcement pyramid); and how extreme in punitiveness is the upper limit of the range of sanctions.” AYRES & BRAITHWAITE, *supra* note 100, at 65.

376. For a comprehensive discussion of game theory models, see generally BAIRD ET AL., *supra* note 6.

377. *See* MILGROM & ROBERTS, *supra* note 20, at 167 (discussing the concept of moral hazard, the “form of postcontractual opportunism that arises because actions that have efficiency consequences are not freely observable and so the person taking them may choose to pursue his or her private interests at others’ expense).

378. *See* TILLINGHAST-TOWERS PERRIN, 2001 DIRECTORS AND OFFICERS LIABILITY SURVEY

Well run corporations should establish a corporate policy addressing risk, and adequately inform themselves about those risks, as well as delineate policies about when such risks must be disclosed.³⁷⁹ In terms of what should be disclosed, information that is—or ought to be, in a well-run company—before the directors and officers includes financial information, current business developments, and future plans. This is the same information that should be before the investors and other stakeholders, such as employees.³⁸⁰ Making sure that this information gets out to the market is equally important.³⁸¹ There is strong evidence of the link between financial statement fraud and weak corporate governance.³⁸² But mandating corporate compliance programs, such as the system under the Sarbanes-Oxley Act, imposes high costs without any indication of their effectiveness. A far more efficient solution would be to empower the tripartite structure of the enforcement pyramid through a system of director liability, actively enforced by the SEC and private litigation. Although increasing the penalties on risk-averse decisionmakers may impose excessively high social costs by stifling innovation,³⁸³ this reasoning does not apply to risk-

7 (2002) (reporting that 38.8% of all shareholder claims involved inadequate or inaccurate financial reporting, up from 34.5% in 2000 and 19.9% in 1990. At the same time, the percentage of shareholder claims relating to merger, acquisition and divestiture activity declined from 40% in 1990 to 18% in 2001). *But see* Patricia M. Dechow & Douglas J. Skinner, *Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators*, 14 ACCOUNTING HORIZONS 235, 244 (2000) (expressing uncertainty as to whether the kind of financial reporting that crosses over into fraud is increasing or just increasingly visible).

379. *See, e.g.*, Dennis R. Dumas, *Targeting the Board*, BUS. L. TODAY, June 6, 1997, at 30 (discussing the importance of board policies regarding risk disclosure).

380. *See* COX ET AL., *supra* note 175, at 17 (explaining that the indirect costs of mandatory disclosure, such as liability and erosion of competitive advantage are minuscule compared to the uncertainty and delay of compliance with integrated disclosure for new offerings, and suggesting that the solution is a company registration process coupled with the elimination of Section 11 liability).

381. Brokers' duties under the United States federal securities laws include an affirmative obligation to have a reasonable basis for any recommendation. Mandatory disclosure gives brokers such a basis. Recognizing the importance of brokers' recommendations, they may be liable to the retail investor for any discrepancy in the information the issuer has released to the public and its recommendation. Broker liability under § 12(2) of the 1934 Act is premised on any misstatements in the broker's recommendation, together with the imposition of a suitability requirement.

382. *See* Patricia M. Dechow et al., *Causes and Consequences of Earnings Manipulations: An Analysis of Firms Subject to Enforcement Actions by the SEC*, 13 CONTEMP. ACCT. RES. 1 (1996) (documenting links between financial statement fraud and weaker governance structures such as an insider-dominated board, a CEO who is the company founder, CEO who is chairman of the board, and the absence of an audit committee); *see also* Mark S. Beasley, *An Empirical Analysis of the Relation Between the Board of Director Composition and Financial Statement Fraud*, 71 ACCOUNT. REV. 443 (1996) (similar conclusions about the presence of insiders, but finding that an audit committee did not affect the probability of financial fraud).

383. Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L.

prone managers of corporations on the brink of insolvency.³⁸⁴

To prevent director and regulatory capture, third parties who are public-regarding must be able to enforce compliance with regulation.³⁸⁵ The costs of capture are increased by having third party enforcement. In addition, this tripartite enforcement structure pushes the evolution of cooperation by increasing the randomness of enforcement, similar to the firm-but-fair strategy. Recall that firm-but-fair is a strategy similar to tit-for-tat, except that it has the ability to prevail in an environment of defectors by starting with cooperate as a strategy, defecting in the next round if the other player defected in the first round, is "more wary of resuming cooperation after a round of mutual defection, and does so only with a certain probability, which depends on the precise payoff values and the expected interaction length."³⁸⁶ It is more random, less predictable, and a good strategy to prevent exploitation.

Investors are the logical choice for this third party enforcement. Empowering investors avoids the problem that Ayres and Braithwaite recognized in their tripartism structure in which the public interest groups that they recommend as the third players in the regulation game are public-regarding, but not firm profitability-regarding.³⁸⁷ Investors care about profitability as well as transparency.

If directors face liability, they have a personal stake in becoming informed monitors of corporate financial developments.³⁸⁸ Regulatory reluctance to pursue directors for securities fraud,³⁸⁹ may stem from the fear that the specter of liability will scare able directors away from service.³⁹⁰ In order to keep the ranks of public firms' directors from being decimated after *Smith v. Van Gorkom*,³⁹¹ for

REV. 1551, 1562-63 (1998).

384. See Macey, *supra* note 313, at 338 (suggesting that because "increasing the probability of detecting criminals is costly, the optimal deterrence scheme may involve keeping the probability of detection low and the penalties high").

385. AYRES & BRAITHWAITE, *supra* note 100, at 71.

386. Nowak et al., *supra* note 95, at 18.

387. AYRES & BRAITHWAITE, *supra* note 100, at 71.

388. TILLINGHAST-TOWERS PERRIN, *supra* note 378, at 4, 7. D&O policies usually have three separate components, corporate reimbursement coverage, which covers the organization's indemnification responsibilities, entity coverage for claims against the organization, and personal coverage for directors and officers for situations that are not covered by the indemnification statutes. Although the average corporate reimbursement flat deductible was \$418,000 for U.S. insured for-profit corporations in 2001, 96% of the U.S. survey participants had no personal coverage deductibles up from 50% of those surveyed in 1990. *Id.* at 5.

389. GAO Report, *supra* note 1, at 20 (noting how few cases are brought against directors).

390. Many articles were written after the *Van Gorkom* decision about the supposed flight of directors from service. The evidence appears to be entirely anecdotal, however. See, e.g., Roberta Romano, *Corporate Governance in the Aftermath of the Insurance Crisis*, 39 EMORY L. J. 1155, 1156 (1990) [hereinafter Romano, *Corporate Governance*] (discussing periodical articles about directors leaving in droves).

391. 488 A.2d 858 (Del. 1985).

example, many states enacted indemnification statutes.³⁹² These statutes typically permit shareholder approved charter amendments that either eliminate or limit directors' liability for negligence.³⁹³ Thus, directors' exposure for negligence is minimal.³⁹⁴ Reckless or wrongful conduct that may expose directors to significant liability,³⁹⁵ however, and that is precisely the kind of behavior at stake in the Enron, WorldCom and other recent corporate financial fraud debacles. The problem is two-fold: lack of political will to enforce regulation, and private litigation barriers. The reputational costs associated with losing lawsuits are an important deterrent, even if the costs are paid by an insurer.³⁹⁶

Insurance is a way of reducing the costs of risk bearing when people are facing statistically independent risks.³⁹⁷ Relying on insurance may be problematic. There is the well known problem of moral hazard; the directors may undertake more risk if insurance will bail them out.³⁹⁸ In addition, insurance

392. See, e.g., Roberta Romano, *What Went Wrong with Directors' and Officers' Liability Insurance?*, 14 DEL. J. CORP. L. 1, 24, 29 (1989) [hereinafter Romano, *What Went Wrong*] (noting the "strong, critical reaction to the [*Smith v. van Gorkom*] decision by boards, commentators and the Delaware legislature" resulting in a majority of states enacting indemnification statutes although "the decision did not alter any substantive liability rule"). The indemnification statutes may have proved popular with shareholders because they were perceived as "eliminating a class of lawsuits where insurance payouts defray legal costs rather than compensate shareholders, and any deterrent effect is quite problematic." See also Romano, *Corporate Governance*, *supra* note 390, at 1156 (concluding that shareholder derivative suits were the impetus for the widespread adoption of charters indemnifying directors for negligence).

393. Romano, *What Went Wrong*, *supra* note 392, at 34. Insurance may be preferable to indemnification even if they cover roughly the same exposure because if the corporation becomes bankrupt, it will be unable to pay litigation claims, while the insurance will be unaffected.

394. See Romano, *Corporate Governance*, *supra* note 390, at 1160-61 (observing that "over 90% of a random sample of 180 Delaware firms adopted a limited liability provision within one year of the statute's enactment").

395. See *id.* at 1161 ("[C]lass actions alleging federal securities law violations tend to generate larger recoveries than derivative suits.").

396. See, e.g., Noel O'Sullivan, *Insuring the Agents: The Role of Directors' and Officers' Insurance in Corporate Governance*, 64 J. RISK & INS. 545, 546 (1997) (explaining arguments in favor of insurance).

397. See MILGROM & ROBERTS, *supra* note 20, at 211 (explaining that "sharing independent risks reduces the aggregate cost of bearing them"). Independent risks are those that are unrelated to each other, for example the size of the state lottery and the level of the Dow Jones Industrial average.

398. See *id.* at 174-76 (discussing the perverse effects of the moral hazard problem posed by the juxtaposition of federal insurance with rate competition in the context of the savings and loan disaster of the 1980's). The savings and loan crisis of the 1980s involved moral hazard not only with respect to the S&L owners who gambled with their depositors' money (knowing that insurance would cover their losses), but also the depositors (who relied on insurance rather than monitoring the banks), and the legislature (which raised the amount of available insurance, attracting large

is subject to cyclical availability that is not well understood.³⁹⁹ Exclusions may limit coverage in unanticipated ways.⁴⁰⁰ The premiums for Directors and Officers Liability Insurance are increasingly expensive.⁴⁰¹ These problems are not insurmountable, however.

Increased monitoring and verification are one solution to the moral hazard problem.⁴⁰² That was the role that auditors, the stock exchanges (sro's), rating agencies and government regulators were supposed to play. While each of these play a role in developing competing sources of information, they each have their own interests that diverge from the goal of investors in monitoring the directors. Insurance, on the other hand, has a stake in the monitoring process that is better aligned with that of the shareholders.⁴⁰³

The "tall enforcement pyramid" of Ayres and Braithwaite, using escalating regulatory sanctions in a tit-for-tat strategic game,⁴⁰⁴ solved the problem of discovering information in large bureaucracies by having internal inspectors more familiar with the workings of the corporation than outsiders could be.⁴⁰⁵

Directors' and officers' liability insurance ("D&O" insurance) typically covers the costs of lawsuits against directors and officers brought by shareholders and third parties, as long as there is neither an admission nor a judicial finding of bad faith.⁴⁰⁶ Insurance costs and premiums will reflect litigation and business risks, and insurers demand information from firms to assess these risks. Claims and notifications of suits give the insurer an opportunity to examine the aspects

deposits to the S&L's without increased regulatory monitoring). *Id.* at 176.

399. *See, e.g.*, Tillinghast-Towers Perrin, 2001 Directors and Officers Liability Survey Summary at 3 (stating that "the firming of the D&O market—even the sharp increase seen by some sectors—does not signal a return to crisis conditions similar to those of the mid-1980's" and noting that there is "less dependence on a small group of reinsurers now than 16 years ago"). *See id.* at 9.

400. For example, although there is no "standard" directors and officers liability insurance policy, most policies have exclusions for self-dealing, and the number of potential policy exclusions has increased since 1984. *Id.* In addition, court interpretations of policy exclusions may create some uncertainty.

401. *See id.* at 2 (noting that "[n]early all segments in the U.S. saw sharp increases in premiums as well as more stringent underwriting").

402. *See* MILGROM & ROBERTS, *supra* note 20, at 186 (one remedy for moral hazard problems is increased monitoring and verification).

403. *See, e.g.*, John E. Core, *The Director's and Officer's Insurance Premium: An Outside Assessment of the Quality of Corporate Governance*, 16 J. L. ECON. & ORG. 449, 449 (2000). (finding "a significant association between D&O premiums and variables that proxy for the quality of firms' governance structures").

404. *See* AYRES & BRAITHWAITE, *supra* note 100, at 38-39.

405. *See id.* at 105 (citing Braithwaite's studies of the pharmaceutical industry in which managerial inside knowledge of people and processes permitted him effective quality controls).

406. *See* Core, *supra* note 403, at 450 (describing D&O liability coverage). Corporate coverage reimburses the firm when it indemnifies its officers and directors, and personal coverage provides officers and directors with direct coverage if the corporation does not. *Id.* at 453-54.

of corporate governance giving rise to the dispute, and thus provide for external monitoring of the firm.⁴⁰⁷

Empowering a third group that has a direct stake in the interactions is a way out of the capture conundrum in which directors' and regulators' sucker payoffs are less than their punishment payoffs. The problems of cyclical availability and what firms may consider to be exorbitant pricing can be solved by self-insurance. A self-regulatory group for large publicly held corporations specifically focused on detecting financial fraud may solve the moral hazard problem of diffuse responsibility for financial reporting, as well as cyclical availability and escalating costs that are unrelated to risk.

The structure I propose would be a self-insurance group that consists of financial specialists. They would do both regular and spot inspections, and advise the firm of any problems discovered in the audit. The information they uncovered would be confidential.⁴⁰⁸ Because the insurance rates would depend on the compliance of the firms, the firms have a stake in complying with the self-regulators. And the insurance group has its own interests—keeping liability down—motivating it to do a thorough inspection. Because the majority of the recent corporate debacles appear to have involved financing vehicles and capitalization decisions, the insurance would be limited to financial disclosures.

CONCLUSION

Evolutionary game theory and empirical studies of cognition not only challenge some of the fundamental assumptions of law and economics, they also provide insights into the role of law in shaping optimal social interactions. Socially efficient norms will not necessarily prevail without assistance. Reciprocity is a key to human interactions, but evolutionary game theory demonstrates the importance of structuring initial conditions and providing coordinating signals to achieve socially optimal payoffs. Because not all circumstances permit socially efficient norms to prevail, relying on market forces to channel behavior is evolutionarily shortsighted. Regulation and enforcement are important components of well functioning capital markets. Enforcement efforts (private and public) have been dramatically curtailed, however. Investors' legal protections have been shrinking. Legislative reform and judicial activism have both eaten away at core investor protection principles. In the wake of this trend, a series of spectacular corporate debacles has made headlines around the world. From an international perspective, accommodating regulatory needs while encouraging harmonization of a global marketplace demands sensible minimal regulation coupled with shareholders empowered to police fraudulent statements and omissions.

407. See O'Sullivan, *supra* note 396, at 545 (concluding that in large publicly held companies, D&O insurance performs a monitoring function).

408. The SEC does not require firms to disclose anything about their D&O insurance to their shareholders. Core, *supra* note 403, at 475. Thus, any information uncovered by the self-investigatory body should remain similarly confidential.

Large public corporations, with their bureaucratic diffusion of responsibility, pose an immense challenge to efficient markets that depend on a free flow of accurate information for their well being. The Enron implosion is an illustration of the problems that such diffusion of responsibility can create. The immediate congressional reaction to Enron, however, enacting the Sarbanes-Oxley Act, was neither necessary nor sufficient to solve these problems. The corporate governance provisions of the new legislation, although far from novel, are misconceived. The corporate governance provisions do little to change existing law, while imposing high costs on corporate shareholders. Moreover, although the concept of a corporate/ government partnership in fighting corporate crime has gained academic and political currency, there are good reasons to doubt the efficacy of corporate compliance programs as a partner in crime control.

The idea that companies must conduct their business with as much openness as possible is consonant with ideals of corporate democracy⁴⁰⁹ and with the assumption that people make better decisions if they have more information. Increased knowledge decreases uncertainty.⁴¹⁰ The economic meaning of information is not only data, but also the web of social practices through which the data has meaning.⁴¹¹ At a very minimum, government's task is to ensure that there is an appropriate macroeconomic climate for decisionmaking.⁴¹²

Directors should not be able to evade liability for the abdication of their oversight duties. Functional monitoring is a prerequisite for a sound economy. Voluntary acceptance of rules that promote participants' objectives is undoubtedly preferable to sanctions as an economic solution to achieving cooperative behavior.⁴¹³ It is certainly cheaper. But evolutionary game theory posits that stabilizing cooperative interactions requires would-be defectors to face the threat of sanctions and "that those who are charged with identifying defectors

409. See Stephen Labston, *Bush Doctrine, Lock Em' Up*, N.Y. TIMES, June 16, 2002, § 3, at 12 (quoting Donald C. Langevoort) ("[T]he broader view is that the investor needs not only a sense of protection from bad apples [individual miscreants], but that companies must conduct themselves with an eye toward more openness.").

410. See MARIO BUNGE, *FINDING PHILOSOPHY IN SOCIAL SCIENCE* 83 (1996) (arguing that the larger the number of variables in a particular problem, and the less is known about the variables' interrelationships, the more complex the situation becomes, and the less relevant prior knowledge becomes).

411. See Gerhard Roseger, *Aspects of Uncertainty and Complexity in Technologies and Technosystems*, *EVOLUTION AND PROGRESS IN DEMOCRACIES* 123, 140 (Johann Gotschl ed., 2001) (arguing that innovation requires conditions for the diffusion of existing knowledge, and that in the United States, the willingness to "suspend belief in competitive markets as the primary source of all desirable innovations" resulted in creative technological innovations, but that these innovations nonetheless were motivated by market signals).

412. See *id.* at 125 (discussing the importance of government in shaping conditions that stimulate cooperation).

413. McClennon, *supra* note 149, at 183 (arguing that a commitment to rules is instrumentally rational as a way of solving coordination problems).

and carrying out such sanctions be sufficiently motivated to do so.”⁴¹⁴ In repeated interactions, informal norms of reciprocity may emerge, but only if participants expect that defection will be met with retaliation at the next iteration of the game.⁴¹⁵ Increased reporting and punishment of defectors yield increased cooperation if others in the community, who are not necessarily co-players, also retaliate.⁴¹⁶ Thus, although insurance, like compliance programs, is a cost that will be borne by the shareholders, it is more likely to be effective in deterring corporate misconduct. Because the Sarbanes-Oxley Act fails to recognize or accommodate the interactive strategic processes of director decisionmaking, it is not likely solve the problems it set out to address, and will have little effect on deterring or preventing corporate misconduct. In sum, insuring that directors exercise their oversight functions is vital for a healthy economy.

414. *Id.* at 209-10 n.55.

415. *Id.* at 200.

416. *Id.*

